National Institute for Health and Clinical Excellence

Local government public health briefings

Health inequalities and population health

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Introduction

This briefing summarises NICE's recommendations for local authorities and partner organisations on population health and health inequalities. It is particularly relevant to health and wellbeing boards.

Health inequalities impact on people and communities

Health inequalities are differences between people or groups due to social, geographical, biological or other factors. These differences have a huge impact, because they result in people who are worst off experiencing poorer health and shorter lives.

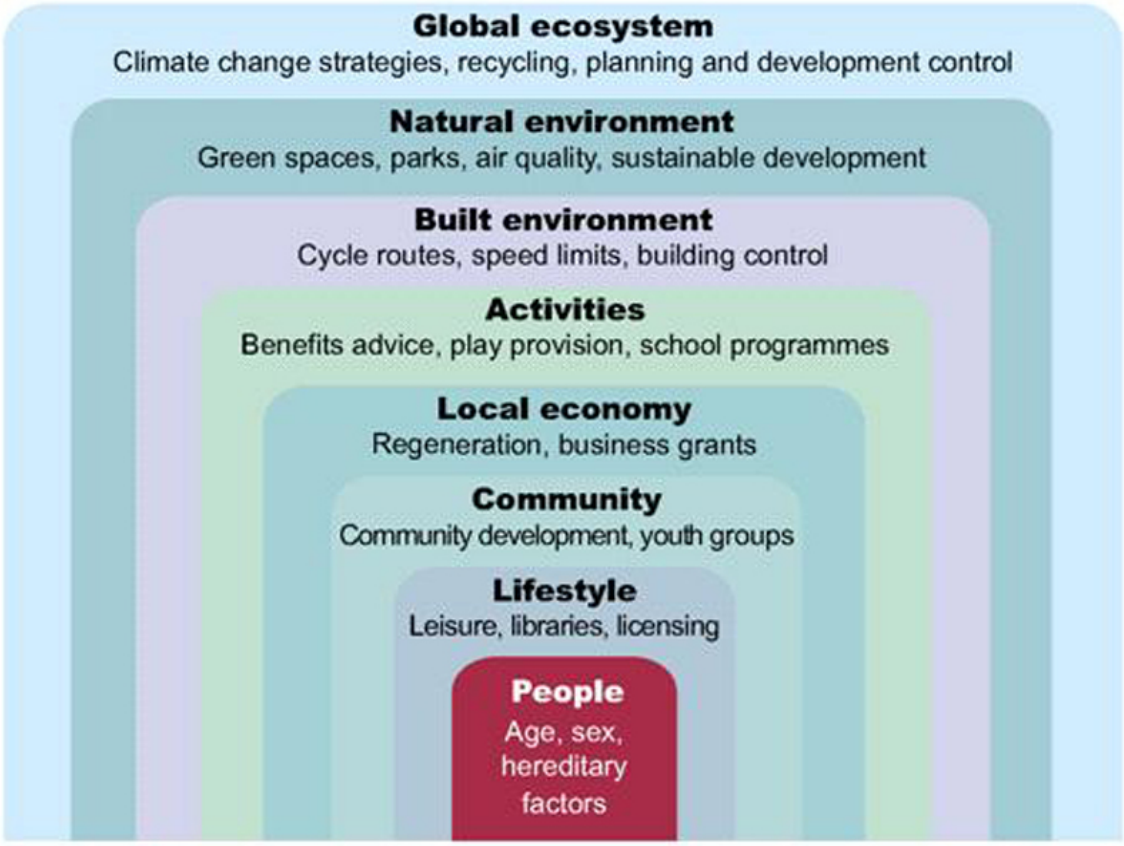
Some differences, such as ethnicity, may be fixed. Others are caused by social or geographical factors (also known as 'health inequities') and can be avoided or mitigated.

Tackling health inequalities

Local authorities are uniquely placed to tackle health inequalities, as many of the social and economic determinants of health, and the services or activities which can make a difference, fall within their remit (see diagram 1). The challenge is to reduce the difference in mortality and

morbidity rates between rich and poor and to increase the quality of life and sense of wellbeing of the whole local community.

Diagram 1: The social determinants of health and examples of local government services and activities that can make a difference



Source: adapted from Campbell F (editor) (2010) The social determinants of health and the role of local government.

Effective interventions to improve health and reduce health inequalities (so reducing the social gradient) can be measured by comparing data on mortality and morbidity with a measure of a person's social position and their health. In this country, the lower someone's social position, the worse their health is likely to be.

The National Institute for Health and Clinical Excellence (NICE) is an independent organisation providing guidance on the promotion of good health and the prevention and treatment of ill health.

For further information on how to use this briefing and how it was developed, see About this briefing.

What can local authorities achieve by tackling health inequalities?

Cut local public service costs

Poor health affects the economy and local services

In England, the cost of treating illness and disease arising from health inequalities has been estimated at £5.5 billion per year. In terms of the working-age population, it leads to productivity losses to industry of between £31–33 billion each year. Lost taxes and higher welfare payments resulting from health inequalities cost in the region of £28–32 billion (Estimating the costs of health inequalities: A report prepared for the Marmot review).

Tackling tobacco use alone would save local services millions a year[1] (see The case for local action on tobacco). For example:

- £160 million in a city such as Liverpool, where there are high levels of deprivation and inequality
- £61 million in a deprived London borough such as Newham
- £24 million in a less deprived local authority such as South Oxfordshire District Council

A strong business case for investing in people's health

Local authorities can make a strong business case for investing in activities to improve people's health and to tackle health inequalities (Valuing health: developing a business case for health improvement).

For example, Lancashire County Council used the Marmot review economics reports to help analyse the economic cost of health inequalities in Lancashire and build on work undertaken for its joint strategic needs assessment (JSNA).

Taking into account days of work lost, the cost of premature deaths and healthcare, it was estimated that health inequalities cost Lancashire £2.45–3.98 billion a year. This represents 3.4–5.5 times the County Council's 2010/11 budget.

Improving the health of the most deprived 40% of its population to the cross-Lancashire average would prevent an estimated 910 premature deaths and increase disability-free life expectancy. Halving the health gap between the least deprived fifth of the population and the rest would save 1543 premature deaths, resulting in an average extra 1.3 life years and 2.5 disability-free life years per person.

The Council estimated that closing the health gap completely between the best and worst-off would save 3085 premature deaths a year. It would also give everyone an extra 2 years of life and at least an extra 4 disability-free years. Changes of this magnitude in disability-free life years could result in significant reductions in public service costs (Estimating the costs of health inequalities: A report prepared for the Marmot review).

Reduce premature deaths

Poor health is linked to social and economic disadvantage

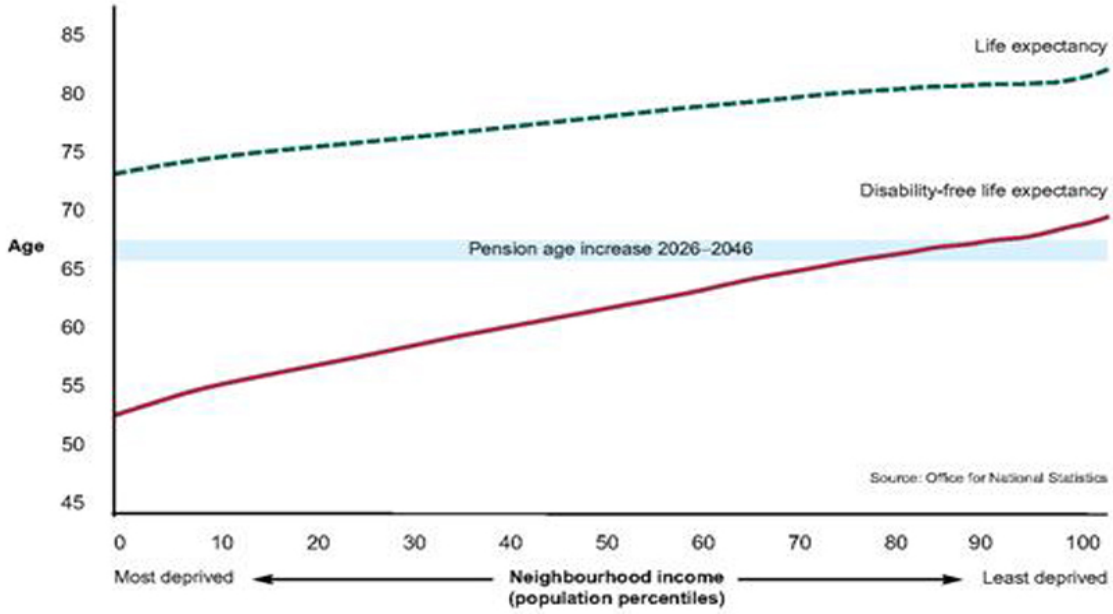
The social and economic determinants of health such as income, employment, education and environment can lead to inequalities in health. (See Understanding health inequalities and diagram 2.)

For example, 3 out of 4 families that receive income support spend a seventh of their disposable income on cigarettes (Poor smokers) and interventions that focus on reducing levels of smoking can make a real difference to health inequalities. (See NICE guidance on identifying and supporting people most at risk of dying prematurely for further information.)

Diagram 2 illustrates the relationship between the social gradient in health and disability-free life expectancy. The rise in the state pension age – to age 66 by 2026 and 68 by 2046 – means

many people who are disadvantaged will have to continue working while experiencing ill health or a disability.

Diagram 2: The social gradient in health and the impact of deprivation on life expectancy



Drive improvement

Improve population health

Healthcare services contribute to an estimated third of the improvement in the population's life expectancy. The remaining two-thirds has been attributed to public health activities aimed at changing people's lifestyle behaviours and tackling health inequalities (Healthy Lives: healthy people: Our strategy for public health in England 2011).

As average life expectancy has increased, thanks largely to advances in public health activities aimed at improving people's health, so the demands on services that deal with the chronic diseases of old age have also increased. (These diseases include, for example, dementia, diabetes and arthritis.)

Lifestyle choices are also leading to a rise in the incidence of diseases that are linked to the way we live. For example, as rates of obesity and alcohol consumption have increased, there has

been a corresponding rise in the incidence of arthritis, diabetes and chronic liver disease, in particular, among those who are the most disadvantaged.

In line with the World Health Organization (WHO) ideal, one of the 2 overarching aims of the public health outcomes framework is to reduce health inequalities between people, communities and areas. (See: World Health Assembly Declaration. Health-for-all policy for the 21st century, Public health intervention research: the evidence and A public health outcomes framework for England, 2013–2016.)

Create happier, healthier communities

A range of local authority services can help reduce social inequalities and improve people's health and wellbeing. These include: environmental health, leisure, planning, schools and transport. (See the Improvement and Development Agency report on local authorities and the social determinants of health.)

Interventions at different stages of people's lives can make a real and measurable difference. For example, providing support for children and families during the early years of their children's lives can help break the cycle of deprivation and poor health.

Local authorities can also encourage and support community-level action that strengthens positive relationships and networks by building trust and reciprocity ('social capital'). This can benefit everyone (Sticking together. Social capital and local government).

[1] This includes NHS care, sick days caused by tobacco use and the resulting productivity losses, illnesses caused by passive smoking, smoking breaks, domestic fires caused by tobacco use and the cost of clearing up tobacco-related litter.

What NICE says

NICE recommendations

NICE guidance offers:

- recommendations based on the best available evidence to help you plan, deliver and evaluate successful programmes
- an objective and authoritative summary of the research and evidence, reviewed by independent experts from a range of backgrounds and disciplines
- an assessment of the effectiveness and cost effectiveness of public health interventions.

Following all of NICE's recommendations on tackling health inequalities will help you make the best and most efficient use of resources to improve the health of people in your area. (Please note, details of new guidance that NICE is developing to tackle health inequalities are available on our website.)

Background

Although there is an established relationship between social and economic inequalities and health, less than 0.4% of public health research has focused on interventions to improve health inequalities (Public health intervention research: the evidence).

Nevertheless, there is enough evidence about what works to take effective action and NICE recommendations can help local authorities improve health outcomes across all 4 domains of the public health outcomes framework for England, 2013–2016.

Interventions and services

Universal and individual interventions

Simply working to narrow the health gap ('raising the health of the poorest, fastest'[2]) and focusing on the health needs of a small proportion of the population may not be enough to achieve the biggest impact on local populations.

Tackling the social gradient in health requires a combination of both universal (population-wide) and targeted interventions that reflect the level of disadvantage and hence, the level of need (proportionate universalism).

Information gathering

Information gathering is vital for the joint strategic needs assessment and to help develop the health and wellbeing strategy. It provides a means for local authorities and their partners to allocate resources effectively to reduce variation in service access and uptake

For example, GP data in Birmingham shows that the prevalence of coronary heart disease among patients is relatively low in the 20% most deprived communities, compared to other areas in the city. However, data from the Office for National Statistics shows that coronary heart disease mortality is relatively high in these deprived communities. Either many people in these areas are failing to register with a GP, or they are failing to attend GP surgeries and so do not have their symptoms diagnosed (Healthy lives: healthy people 2011).

Understanding the risk factors for poor health outcomes and identifying local need is the first step (Health inequality indicators for local authorities and primary care organisations).

Identifying those at risk and focusing interventions according to need is the next step – and also requires good quality information systems and data. See:

- NICE public health guidance on identifying and supporting people most at risk of dying prematurely.
- The social determinants of health and the role of local government (for NICE frameworks to help gain an understanding of different segments of a local population).

Information gathering: 2 examples

Physical activity Creating the right environment in which physical activity can become a habitual part of people's everyday life requires good quality intelligence to determine the issues that may need addressing.

This includes, for example, pinpointing geographical areas which make it difficult for them to walk or cycle. It also includes identifying those communities with particular access or behavioural issues, including concerns about personal safety or fear of crime.

Then action can be taken by, for example:

- Planning and providing a network of routes for walking, cycling and other active transport modes. This may include particular emphasis on improving access for more deprived communities.
- Ensuring all pedestrians and cyclists are given priority when developing or maintaining roads.
- Identifying those communities that would benefit most from changes in the local infrastructure.
- Ensuring public walkways and open spaces accommodate people whose mobility is impaired. Walkways and spaces should offer convenient, safe and attractive access to workplaces, homes, schools and other public facilities (The latter includes shops, play and green areas and social destinations).

For details see making changes in other areas on NICE's 'Physical activity' pathway.

Alcohol Good quality intelligence can also help local authorities determine what, if any, adverse impact the issuing of an alcohol licence might have on a particular locality. For details see prevention strategies and policy on NICE's 'Alcohol-use disorders' pathway.

Tackling harmful behaviours

Local authorities should focus on behaviours that increase the risk of ill health and premature death – and are generally more prevalent among people from lower socioeconomic groups. For example:

- **Alcohol** NICE recommends using local crime and related trauma data to map the extent of alcohol-related problems before developing or renewing a licensing policy. For details see prevention strategies and policy on NICE's 'Alcohol-use disorders' pathway.
- **Obesity** NICE recommends making changes to the environment and the workplace to encourage people to be more physically active. This, in turn, will help reduce the number of people who are overweight and prevent them becoming obese. For details see physical activity in the workplace and physical activity and the environment on NICE's 'Physical activity' pathway.
- **Poor diet and lack of physical activity** is associated with type 2 diabetes NICE recommends using community resources and lay and peer workers to tailor interventions

and target communities at high risk of type 2 diabetes. For details see local action on NICE's 'Preventing type 2 diabetes' pathway

- **Smoking** NICE recommends providing stop smoking services for minority ethnic and socially disadvantaged communities. For details see local authority services to support smoking prevention and cessation on NICE's 'Smoking' pathway.
- **Unintentional injuries** NICE guidance on strategies to prevent unintentional injuries among under-15s reports that, although deaths and hospital admissions from unintentional injuries are falling overall, the highest incidences are reported in areas with high levels of deprivation. It makes recommendations accordingly.

Planning and commissioning services

Assessing the impact of policies on health and health inequalities

Local authorities and their partners should use equity proofing, health equity audit and health impact assessment (HIA) tools to assess the potential impact of all their policies on health and health inequalities. Even policies and partnership activities without an explicit health focus should be assessed, as a matter of routine.

Equity proofing helps ensure all policies and programmes address the social determinants of health and health inequalities (see The development of the evidence base about the social determinants of health). Including a health equity audit as part of the joint strategic needs assessment (see Health equity audit made simple) can help local authorities and their partners to:

- develop strategy and plans according to need
- identify and work with community and health partners
- commission activities based on the best available evidence
- implement interventions to tackle inequity (see section 8.1.1 in The development of the evidence base about the social determinants of health).

For example, in Great Yarmouth/Waverley, the Gini co-efficient and associated data from the slope index of inequality, were used to carry out a health equity audit to identify areas where there were large disparities in health outcomes. Measures included high teenage conception

rates, low vaccination rates, high coronary heart disease mortality and other indicators which appear disproportionately among disadvantaged groups.

The information was used to decide on neighbourhood renewal investment priorities and to target services towards (but not exclusively within) areas of particular need. These data were also used to track changes overtime.

For other examples of health equity audit in practice see Health equity audit – learning from practice briefing.

Health impact assessment is another possible approach. This combines procedures, methods and tools to help assess the potential health impact of a proposal and makes recommendations for improving it. (See Health impact assessment tools, Introducing health impact assessment (HIA): Informing the decision-making process and UK HIA guides.)

Health impact assessment should be applied throughout the policy and planning stages to:

- evaluate all policies and programmes including, for example, transport, planning, housing, education, regeneration and health improvement
- maximise health outcomes (positive and intended)
- minimise unintended and negative outcomes (see section 8.1.2 in The development of the evidence base about the social determinants of health).

For example, health impact assessment was used during development of the New Deal for Communities (NDC) programme, a 10-year, area-based initiative to tackle health inequalities in deprived areas. (It specifically targeted 36 indicators grouped under 6 broad headings. Three had place-related outcomes: crime, community and, housing. Three had people-related outcomes: education, health and worklessness in deprived areas)

Following the impact assessment, the New Cross Gate NDC partnership made a number of revisions to their plans (Addressing inequalities through health impact assessment).

Members noted that the process of undertaking the assessment itself helped get the community involved in the programme, raised awareness of health inequalities, empowered the community

and strengthened the partnership. It also made it easier to collect specific information about inequalities in the various communities.

Nationally, the NDC programme evaluation shows it has been successful, with improvements in 32 out of 36 core indicators and 'significant improvements' in 26 indicators (The New Deal for Communities experience: A final assessment).

Health impact assessment and health equity auditing: the results

The outcomes associated with health impact assessment and health equity auditing include:

- equal access for equal need, such as greater availability of free fruit in schools in the most deprived areas
- equal use for equal need, such as greater use of smoking cessation services among low-income smokers
- equal quality of care for all, such as culturally appropriate and relevant maternity services for black and minority ethnic communities
- equal outcomes for equal need, such as greater reductions in coronary heart disease mortality among lower socioeconomic groups.

Examples of good practice

Examples of how NICE's advice on a wide range of issues relevant to local authorities has been put into practice can be found in our shared learning database.

Note that the examples of practice included in this database aim to share learning among NHS and partner organisations. They do not replace the guidance.

[2] Milburn A (2001) Breaking the link between poverty and ill health. Long-term Medical Conditions Alliance conference. Royal College of Physicians

Costs and savings

Identifying and supporting people most at risk of dying prematurely

NICE guidance on identifying and supporting people most at risk of dying prematurely advises that it is cost effective to help disadvantaged groups quit smoking and to carry out other activities with these groups to prevent cardiovascular disease (CVD).

Cost effectiveness has been determined using a non-monetary outcome, the quality-adjusted life year (QALY). This considers how long someone is expected to live – and the quality of those extra years of life gained – as a result of intervening in a particular way.

The cost per QALY of intervening with disadvantaged groups to help them stop smoking (or to discourage them from taking up the habit in the first place) is usually low or very low, and is unlikely to exceed £6000. (NICE guidance generally considers interventions costing below £20,000–£30,000 per QALY to be cost effective, see Measuring effectiveness and cost effectiveness – the QALY).

The cost effectiveness of preventing CVD among these groups depends on the number of people at risk in the whole population and the effectiveness of the intervention. An analysis of the use of statins to prevent a first occurrence of CVD among disadvantaged women found that it is cost effective, if more than 14% of the population is at risk. For example, when 40% were at risk of CVD, prevention activities were estimated to cost £8500 per QALY gained (£4900 per QALY for finding the person and £3600 per QALY for treating them). This compared with about £125,600 when only 1.6% were at risk (£122,000 per QALY for finding them and £3600 per QALY for treating them).

Preventing unintentional road injuries among under-15s

NICE guidance on preventing unintentional road injuries among under-15s: road design identified that road accidents occur disproportionately in deprived areas. It recommends implementing 20 mph zones, with priority given to children and young people in disadvantaged areas who face the greatest risk.

It estimates that such action could lead to a 100% return on investment in the first 12 months, based on the costs recovered from injury and deaths avoided.

Glossary

Gini co-efficient index

The Gini index shows the degree of income inequality between different groups of households in the population in a given area. It can also show how inequality of income has changed over a period of time. A Gini index of zero represents perfect equality and 100, perfect inequality.

Health disadvantage

The differences in terms of health between distinct populations.

Health equity audit

Health equity audit is a process by which local partners and partnerships:

- systematically review inequities in the causes of ill health, and in access to effective services and their outcomes, for a defined population
- ensure necessary action is incorporated into local plans, services and practice
- evaluate the impact of the action on reducing inequity.

See Healthy equity audit made simple.

Health gaps

The differences in health between the worst off and everybody else.

Health impact assessment

A combination of procedures, methods and tools used to judge a policy, programme or project. For example, a health impact assessment could be used to determine how a proposal for a new road or new airport runway will affect local people's health. It involves:

- gathering information on the areas and communities affected and using various tools to predict how it will impact on health
- evaluating the options
- making recommendations to ensure any potential harm is minimised or opportunities to improve health are maximised.

Other similar procedures include strategic environmental assessment, sustainability appraisal and environmental impact assessment.

Proportionate universalism

Using this approach, interventions are delivered to the whole population, with the 'intensity' adjusted according to the needs of specific groups (for example, some groups may need more frequent help and advice). This type of approach can help to reduce the social gradient and benefit everybody.

Slope index of inequality (years)

This is a single score representing the gap between the best-off and worst-off within a district for a chosen indicator.

In the link provided, the slope index score represents the gap in years of life expectancy at birth between the most deprived and least deprived communities within a local authority area. The larger the index score (in years), the greater the disparity in life expectancy.

Social gradient in health

People who are relatively disadvantaged have progressively worse health outcomes than those who are more advantaged. This social gradient in health is calculated by comparing measures of mortality and morbidity with some measure of social position (see below, also see Tackling inequalities in health in England: remedying health disadvantages, narrowing health gaps or reducing health gradients?)

Social position

Social position is determined by factors such as age, gender, ethnicity and/or geography.

Wider determinants of health (also known as the social and economic determinants)

The wider determinants of health include all the major non-genetic and non-biological influences (such as education and employment) as well as individual risk factors such as smoking and alcohol consumption. (See The development of the evidence base about the social determinants of health and Methodological summaries – measuring inequity in health.)

As well as impacting on health, the wider determinants also affect social position which, in turn, has an enduring association with health over time and across different diseases (see above).

Support for planning, review and scrutiny

A range of support tools are available via Into practice on NICE's website. They can help you identify local needs. They can also help with planning and scrutiny activities.

Other useful resources and advice

Further information on inequalities indicators and tools can be found on the London Health Observatory website.

For details of the social gradient in health inequalities across the whole population (health gradients) see:

- Social determinants and their unequal distribution: clarifying policy understandings.
- Tackling inequalities in health in England: remedying health disadvantages, narrowing health gaps or reducing health gradients?
- Intellectual disabilities and socioeconomic inequalities in health: an overview of research.
- Health inequalities: concepts, frameworks and policy – briefing paper.

About this briefing

This briefing is based on a range of NICE guidance published up to July 2012. The topics covered include: cardiovascular disease, obesity, preventing type 2 diabetes, risk of dying prematurely and smoking. It was written with advice from NICE's Local Government Reference Group, and using feedback from council officers, councillors and directors of public health.

It is for local authorities and their partner organisations in the health and voluntary sectors, in particular, those involved with health and wellbeing boards. This includes local authority officers and councillors, directors of public health, and commissioners and directors of adult social care and children's services. It will also be relevant to members of local government scrutiny committees.

This briefing may be used alongside the local joint strategic needs assessment to support development of the joint health and wellbeing strategy.

This briefing is intended to be used online and it includes hyperlinks to sources of data and further information.

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