

Improving the public's health

A resource for
local authorities

Authors

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The King's Fund is an independent charity working to improve health and health care in England. We help to shape policy and practice through research and analysis; develop individuals, teams and organisations; promote understanding of the health and social care system; and bring people together to learn, share knowledge and debate. Our vision is that the best possible care is available to all.

Published by
The King's Fund
11–13 Cavendish Square
London W1G 0AN
Tel: 020 7307 2591
Fax: 020 7307 2801
www.kingsfund.org.uk

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First published 2013 by The King's Fund

Charity registration number: 1126980

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ISBN: 978 1 909029 22 4

A catalogue record for this publication is available from the British Library

Available from:

The King's Fund
11–13 Cavendish Square
London W1G 0AN
Tel: 020 7307 2591
Fax: 020 7307 2801
Email: publications@kingsfund.org.uk
www.kingsfund.org.uk/publications

Edited by Kathryn O'Neill

Typeset by Grasshopper Design Company

Printed in the UK by The King's Fund

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Acknowledgements

Thank you to all those who have helped us to develop this resource, we have learnt from you all. Unfortunately, you are too numerous to mention, but thanks go in particular to Tony Harrison, Sophie Corinini-Cronberg, Dominic Harrison, Paul Ogden, Tim Chapman, Ellie Tait, Lara Sonola, Mary Jean Pritchard, Lisa Oxlade, Matthew Ashton, Candace Imison, Thomas Astell-Burt, Jessica Allen, Fiona Wright, Lucy Saunders, Maria Arnold, Jason Strelitz, Thom Crabbe, Chris Shaw and Ian Gray.

Foreword

Local authorities have a proud history of improving population health. First formed as a reaction to the health problems of rapid industrialisation and the urban poor, they have always been important to our health. The recent public health reforms place them once again centre stage in the battle to improve population health and reduce inequalities. Thankfully, we have better knowledge than ever before, through Fair Society, Healthy Lives and other evidence, of how the physical, social and economic conditions in which we are born, grow up and work shape our health directly and indirectly by influencing our lifestyles.

Public Health England, the Local Government Association, Association of Directors of Public Health, and the Institute of Health Equity are committed to developing and supporting the generation of practical, evidence-based resources that will help local authorities fulfil their new duties and maximise their impact on the health of their populations while reducing inequalities between them. We therefore welcome this new document from The King's Fund.

The resource focuses on nine areas in which there is strong and clear evidence that local authorities can have a major impact on health. It sets out why local authorities have an important role, how and why this affects health, what they can do about it and the business case for doing so. But it is rooted in the real world, recognising that all local authorities have to make choices and reflects this in a simple ready reckoner to support them to prioritise in the light of their specific needs and local strategies. It is well supported by further case studies, other resources and further information on The King's Fund website.

We commend this publication to you and believe it will help all local authorities to make a reality of our joint ambition, of health in all policies.



Sir Merrick Cockell
Chairman, Local Government Association



Duncan Selbie
Chief Executive, Public Health England



Janet Atherton
President, Association of Directors
of Public Health



Sir Michael Marmot
Director, UCL Institute of Health Equity

Introduction

Supported by your Director of Public Health, you will be the local leader of the new public health system.

You are best placed to understand the needs of your community and it will be your responsibility to tackle the wider determinants of health at a local level, putting people's health and wellbeing at the heart of everything you do – from adult social care to transport, housing, planning and environment.

Letter from Jeremy Hunt, Secretary of State for Health, and Duncan Selbie, Chief Executive of Public Health England, to chief executives of local authorities, 10 January 2013 ([Department of Health 2013b](#)).

Local authorities have been given renewed responsibility for public health as part of the government's 2012 health and social care reforms. While this is a welcome move, there are as yet few resources to help local authority officers and teams identify 'what works' in improving public health and reducing health inequalities. How, then, can they decide which areas to prioritise, and through which interventions?

In due course, key bodies such as Public Health England, the National Institute for Health and Care Excellence (NICE), academic institutions, and peer learning through the Local Government Association (LGA) and others will provide systematic guidance and support to assist local authorities to fulfil their public health role. In the meantime, this resource pulls together evidence from successful interventions across key local authority functions about 'what works' for improving health and reducing health inequalities. It is mainly aimed at local authority officers whose everyday activities and responsibilities affect the health of the local population, to help them navigate the wide range of resources, toolkits and case studies that are available. But it will also be of interest to local councillors and communities as they become more engaged in local public health issues and be useful for directors of public health and their teams, in conversations with local government officers.

Given that local authority functions can influence public health in many complex and inter-related ways, we have had to be selective. We therefore focus on practical actions that local authority officers and teams can take in these nine key areas:

- the best start in life
- healthy schools and pupils
- helping people find good jobs and stay in work
- active and safe travel
- warmer and safer homes
- access to green and open spaces and the role of leisure services
- strong communities, wellbeing and resilience
- public protection and regulatory services
(including takeaway/fast food, air pollution, and fire safety)
- health and spatial planning.

For each function, we explain why it is important for public health, giving key facts and figures and presenting evidence-based information on what local authority officers and teams can do in their everyday work to improve public health and reduce health inequalities. We present the business case for intervention, and signpost the reader to other evidence, tools and case studies to find out more. We conclude with a section on making difficult choices and prioritising evidence-based actions that improve public health and introduce a simple 'ready reckoner' tool.

This resource does not focus on health behaviour change per se. There is good existing evidence in several areas on behaviour change, and the National Institute for Health and Care Excellence (NICE 2013) and others (Lister and Merritt 2013; Yorkshire & Humber Public Health Observatory 2011) have published resources for local authorities on the effectiveness and cost-effectiveness of behaviour change. Others have shown how important it is to understand how behaviours cluster in local populations (Buck and Frosini 2012) and the wider determinants of health need to be addressed to bring about behaviour change. Nonetheless, there are some settings, such as schools, where local authorities can have an important influence and we include these in this resource. The Institute for Health Equity will also be publishing advice for local authorities in 2014 on the importance of the social determinants of health to behaviour change (UCL Institute of Health Equity 2012).

Local authorities and public health: a welcome renewal of responsibilities

Under the 2012 Health and Social Care Act, central government has given local authorities a core role in public health, with dedicated funding. They will be supported by a new executive agency, Public Health England, and a new public health outcomes framework (PHOF) (Department of Health 2013d). These changes have been widely welcomed, but they need to be complemented by other central government policies.

Central government: the need for Health in All Policies

Central government has responsibilities to support local authorities in their new role and to ensure that its own policies – across all departments – contribute to, rather than undermine, people's health and wellbeing. Public Health England is at the vanguard of this task and will need to speak up strongly on contested regulatory issues such as plain packaging of cigarettes and the minimum unit price of alcohol (Public Health England 2013a). Public health is too important to be left to policy choices determined by ideology rather than evidence-based intervention.

Public Health England has a vital role in the new system, but it can only achieve so much; decisions made across the whole span of central government have a profound impact on the population's health (Stuckler *et al* 2010). There remains 'a missing role' in the new public health system, as we identified in our review of coalition health policy (Gregory and Dixon 2012).

At the policy and operational level, critical decisions made by central government should be subjected to health impact assessments (HIAs), just as planned interventions by local authorities should be. While some HIAs are conducted in Whitehall (Department of Health 2010), they currently have little impact and there is little evidence that they actually influence policy decisions. As the Health Select Committee recommended,

([Health Select Committee 2011](#)) the recently abolished cabinet sub-committee on public health was one potential mechanism for ensuring that HIAs were undertaken systematically, rigorously and transparently.

Core government policy reforms such as welfare – which are likely to have significant health impacts – should be subject to macro-level HIAs. The Department of Health (now with Public Health England) should be pushing for and supporting other government departments to undertake and publish the results of HIAs, but experience to date shows that this has not been done effectively. To have maximum impact, HIAs need to be championed at the highest levels of government, and for that to happen, public health needs to be seen as a priority across government departments – not just within the Department of Health. The government needs to listen to bodies such as the All Party Parliamentary Group on Primary Care and Public Health, which has called for the appointment of a cabinet-level post on public health ([All Party Parliamentary Group 2013](#)).

How local authorities will fulfil their new role

The renewal of local government's role in public health is welcome. As the Marmot Review into health inequalities in England demonstrated in its report, *Fair Society, Healthy Lives* ([Marmot et al 2010](#)), the 'broader determinants of health' – people's local environment, housing, transport, employment, and their social interactions – can be significantly influenced by how local authorities deliver their core roles and functions ([The King's Fund 2013](#)).

Local health and wellbeing boards, on which the local director of public health will sit, will play an important role in leading and co-ordinating activities to improve public health and reduce inequalities, based on assessments of local needs and developing a joint strategy to meet those needs ([Humphries and Galea 2013](#)). From 2015/16, local authorities that succeed in improving on elements of the PHOF will also be rewarded through an incentive payment from central government ([Department of Health 2013a](#)).

To help local authorities fulfil their new public health responsibilities, they have received more than £2.5 billion from the Department of Health in ring-fenced funds in 2013/14, and will receive a similar amount in 2015/16 ([Department of Health 2013c](#)). While these dedicated funds will be very useful, there is greater potential for achieving cost-effective gains in the longer term by focusing the day-to-day activities and functions of local government officers and teams to promote improvements in public health and reduce inequalities.

The increasing emphasis placed by central government on localism will support local authorities to fulfil their role in public health. For example, the Localism Act ([Department for Communities and Local Government 2011](#)) provides a general power of competence for local authorities and gives local communities more power over neighbourhood-level plans, which councils are obliged to support; this provides an excellent opportunity for neighbourhood-level planning for health and use of community assets.

Local authorities are also under new obligations to demonstrate that they are delivering 'social value' ([Public Services \(Social Value\) Act 2012](#)) – that is, that they have considered the social, environmental and economic impacts of their commissioning decisions. This supports their public health role, as social value often impacts on the wider determinants of health ([Social Enterprise UK 2012](#); [Tizard 2013](#)).

Partnership working and health impact assessments: key tools to improve health and reduce inequalities

This resource presents information on evidence-based actions that can help local authorities increase the impact of their activities on health – and demonstrate that impact to others. But providing information is not enough; achieving change requires clarity of purpose, and a robust local framework that maximises the expertise and influence of the local director of public health and the partnerships they form. Such a framework should have outcomes-focused partnership at its heart and include a commitment to systematic health impact assessment.

There is a long history of partnership working to deliver health improvements in England, through local strategic partnerships (LSPs) and agreements (Geddes *et al* 2007; [Planning Advisory Service 2006](#)), total place pilots ([Leadership Care for Local Government 2010](#)), and, most recently, community budgets ([Local Government Association 2013](#)). But evidence demonstrating successful partnership working – with the exception of some Health Action Zones ([Judge and Bauld 2006](#)) – is relatively weak. Two recent systematic reviews show that there is little evidence to date that partnership working has led to demonstrable improvements in what really matters – health outcomes ([Hayes *et al* 2012](#); [Smith *et al* 2009](#)).

Partnerships therefore have to be viewed as a means to an end, not an end in themselves. Establishing a local health and wellbeing board and other partnerships, processes and planning mechanisms is not enough; there must be a clear focus on outcomes, based on evidence of what works. The public health reforms have created the environment necessary to facilitate that focus ([Orton *et al* 2011](#)): a much stronger outcomes framework; a requirement for joint health and wellbeing strategies; and financial rewards for achievement through the health premium.

The systematic use of health impact assessment (HIA) – tools and approaches designed to assess the likely health effects of a given policy when health is not the primary objective – will be critical if local authorities are to deliver their ambitions for improving public health. Quantitative HIAs can help to establish the size and scope of likely impacts, while more qualitative approaches can often challenge the perceived wisdom of planners. For example, many transport projects assume that the main impacts will be on improving physical health, but HIAs have shown that communities can be more concerned about stress, anxiety and security issues ([Pursell and Kearns 2012](#)). Clearly, councils already take health impacts of their different functions into account – for instance, environmental impact assessments consider the pollution effects of housing developments – but these processes need to be systematic, and implemented at scale.

The local director of public health and his or her team can provide guidance on various matters, including how to incorporate health into planning processes, when it is appropriate to conduct an HIA, and how they relate to other key planning processes such as sustainable community strategies and local development frameworks, strategic environmental assessment, and environmental impact assessment.

There are also many easily accessible resources that can help local authorities incorporate health into their systems, plans and processes. Some of the key ones are set out below.

- *HIA Gateway*: a national and international resource, now hosted by Public Health England, which provides information on training courses, case studies, and evidence on HIAs – for those who are new to HIAs and for existing practitioners, or those considering commissioning such assessments ([Public Health England 2013b](#)).
- *Health Impact Assessment in Practice*: a free virtual course on HIA from NHS Scotland ([NHS Scotland 2012](#)).

- Wales Health Impact Assessment Advisory Service: links to HIAs undertaken in Wales ([Wales Health Impact Assessment Support Unit 2013](#)).
- *International Health Impact Assessment Consortium*: hosted by the University of Liverpool, the Consortium aims to improve health and reduce health inequalities by promoting the integration of HIA into policy planning. Includes HIA case studies, courses and training ([Institute of Psychology, Health and Society, no date](#)).
- The Spatial Planning and Health Group – a group of planning and health experts – has produced advice in the form of *Steps to Healthy Planning*, which reinforces the strategic importance of ensuring that health is incorporated into other assessment processes ([Spatial Planning and Health Group 2011](#)).

Local authorities can also play a key role in generating their own evidence about what works by evaluating their interventions and sharing lessons learned. However, this may not be straightforward; well-tested and trusted techniques that are common in medicine, such as randomised controlled trials, are seldom possible or appropriate for evaluating the effects of local authority actions on public health. But there are organisations that can be approached to provide help and advice, including local university departments of public health and epidemiology, and organisations specifically set up to build evidence and become centres of excellence in public health research – for example, Fuse (the Centre for Translational Research in Public Health) ([Fuse, no date](#)), and the Centre for the Development and Evaluation of Complex Interventions for Public Health Improvement (DECIPHer) ([DECIPHer, no date](#)). In the longer term, NICE and Public Health England, together with the National Institute for Health Research, will play a more central role in disseminating best practice through evidence and evaluation.

Putting partnership working into practice: how Blackburn with Darwen developed a framework to improve health and reduce inequalities

Blackburn with Darwen have developed an innovative, planned partnership between the public health team and the rest of the local authority. At the heart of this partnership is a clear focus on outcomes, planning, and rigorous HIA, with the participation of the local community and backing of the local health and wellbeing board.

Case study: Blackburn with Darwen's approach to integrating Health in All Policies

A: Supporting Health in All Policies

1. Establishment of a £1 million Social Determinants of Health Fund (SDOHF) allocated across council directorates to enable effective action on health improvement.
2. Public Health Delivery Agreements (PHDAs) with each Blackburn with Darwen council directorate to deliver:
 - a. five public health outcomes as an 'added value' outcome of their existing activity and investment
 - b. specific interventions agreed as part of the SDOHF.
3. Introduction of a health impact assessment (HIA) process to ensure that all relevant council policies, decisions and resource investments contribute to health improvements.

continued overleaf

Case study: Blackburn with Darwen's approach to integrating Health in All Policies *continued*

B: Investing the new ring-fenced grant in high-quality public health services

1. A review of inherited Public Health and Prevention Programme (PHPP) spend inherited from the NHS Care Trust Plus, to ensure it is in line with the evidence base for health improvement and reduction in inequalities in health.
2. Investment in an Integrated Commissioning Service with Children's Services and Adult Social Care and contribution to Integrated Commissioning with the clinical commissioning group (CCG).

C: Encouraging health promoting environments

1. Establishment of a Health Promoting Settings Programme (HPSP) to include Healthy Towns, Healthy Living Pharmacies, Health Promoting Hospitals, Healthy Schools, and Healthy Communities.
2. The Public Health Directorate will work with partners both within the Council and the wider community to minimise health risk conditions and maximise healthy environments for residents.

D: Supporting local communities

1. Support local voluntary, community and faith (VCF) groups both with direct commissions for public health service delivery and through advice, guidance, and support in public health engagement via the new Public Health Directorate.
2. Improve strategic partnerships with the voluntary, community and faith sector both in bidding for external funding and in aligning the public sector and VCF public health 'offer' for citizens.
3. Work with local communications and social media specialists to improve the way communication is carried out directly with local communities. This will involve improved Digital Public Health Services (DPHS).

E: Making effective and sustainable use of all resources

1. Provide a high-quality Specialist Public Health Directorate serving the community, the council, the CCG, the voluntary, community and faith sector, and citizens.
2. Support the work of the Blackburn with Darwen Health and Wellbeing Board and contribute to the Council core services infrastructure that enable local public health delivery (IT, Finance, HR etc).
3. Work with residents, elected members, the VCF sector and wider public services to maximise the health assets of the community linking public health programmes to the wider 'Your Call' programme.

For more details, please contact Dominic Harrison, Director of Public Health, Blackburn with Darwen Borough Council. Tel: 01254 666933. Email: dominic.harrison@blackburn.gov.uk

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Nine key areas that can improve public health and reduce inequalities

The best start in life

Local authorities have specific statutory duties in relation to children and young people's services ([Citizens Advice Bureau 2013](#)). Here, we focus on broader interventions and national initiatives that local authorities can tap into to improve the health of local children and their families.

How early years experiences can affect health

To get the best possible start in life, a baby's mother needs to be healthy before and during pregnancy and childbirth. There is compelling evidence that a child's experiences in the early years (0–4) has a major impact on their health and life chances, as children and adults.

- Babies that are born below the low birth weight threshold are five times more likely to die as an infant than those of normal birth weight ([The Poverty Site, no date](#)).
- A child's early development score at 22 months is an accurate predictor of educational outcomes at age 26 ([Feinstein 2003](#)), which in turn is related to long-term health outcomes (*see next section*).
- Experiences in early life are increasingly being recognised as having a lasting effect on adult health both directly and through influencing adult health behaviours. Roughly half of the gradient in socio-economic mortality in later life can be explained by early life experience, including its influence on adult smoking rates ([Giesinger et al 2013](#)).
- Adverse experiences in the early years such as excess exposure to alcohol and cocaine use pre-birth, and neglect during the early years, lead to poor development, which affects later life chances. For example, a single reported experience increases the risk of attempted suicide between two and five times and the more poor experiences the higher the risk of lifetime depressive disorders ([Middlebrooks and Audage 2008](#)).
- One in four children is overweight or obese when they start school ([Rudolf et al 2011](#)), which puts them at greater risk of cardiovascular disease and diabetes in later life.

Possible priority actions

Local authorities have an important role in commissioning and delivering early years services, and need to ensure that their actions are well targeted and evidence-based.

There are currently a number of national initiatives under way that should help local authorities better tailor their early years support to the needs of the most disadvantaged children and their families. These include the Early Intervention Grant (over which local authorities have control) and the expansion of the troubled families programme from 120,000 to 400,000 families ([HM Treasury and Department for Communities](#)

and Local Government 2013; Department for Communities and Local Government 2013). Other initiatives include:

- the provision of 10–15 hours a week of free early education, recently extended to around 130,000 of the most disadvantaged 2 year olds
- from September 2014, the provision of free early education places for 2 year olds who live in households that meet the eligibility criteria for free school meals, along with children who are looked after by the local authority (Department for Education 2013)
- the delivery of 15 hours a week of free early education for 3 and 4 year olds, 95 per cent of whom now access their free entitlement.

To provide effective early years support to improve health and reduce inequalities, local authorities can (Hallam 2008):

- target the most disadvantaged children and their families with intensive support, supplementing specific interventions with mainstream universal family support services. Successful interventions tend to be behaviour-focused – for example, coaching parents during play sessions with children – rather than simply providing information. Staff should be adequately trained to provide specialist, intensive support
- focus on vulnerable mothers, from pregnancy until the child reaches the age of two. Programmes that involve health visitors and specialist nurses undertaking home visits have had successful outcomes, including improvements in prenatal health, fewer childhood injuries, fewer subsequent unplanned pregnancies, and increases in maternal employment and children’s school readiness.

The business case for different early years interventions

The costs of caring for preterm birth and low birth weight babies, from birth to the age of 18, are substantial, at around £3 billion (for England and Wales) for each annual cohort (Mangham *et al* 2009). The business case establishing the ‘massive savings’ that can be made from smart investment in early interventions is strong (HM Government 2011a), with much of the evidence coming from robust studies in the United States.

The Nurse–Family Partnership – a voluntary home visiting programme for vulnerable mothers from early in pregnancy until their child is 2 – for example, has generated savings of more than five times the programme costs. Other studies of targeted pre-school interventions have shown a wide range of positive returns on investment (HM Government 2011b).

The Greater London Authority (GLA Economics 2011) has translated the data from the major US studies and applied it to the UK context. Overall, half of pre-school programmes produced strong savings to the public purse, as did three out of eight child welfare and home visitation programmes. This reinforces the importance of sticking to programme designs; without this, it is easy to lose focus and reduce effectiveness and payback.

Finally, there is strong evidence that early intervention to support people experiencing mental health problems can produce significant cost savings and productivity improvements in the longer term, for the NHS, local authorities and others (Knapp *et al* 2011). For example, health visitors identifying and treating postnatal depression improves productivity and leads to cost savings in the medium to short term and targeted parenting programmes to prevent conduct disorders pay back £8 over six years for every £1 invested with savings to the NHS, education and criminal justice systems.

Further resources and case studies

- Graham Allen MP's second report to government, *Early Intervention: Smart investment, massive savings* (HM Government 2011a), includes an annex on the 25 best early intervention programmes in the United Kingdom.
- The Children and Young People's Health Outcomes Forum has produced two recent reports (2013a, 2013b) one on public health and prevention, the other on tackling inequalities in health outcomes.
- The Greater London Authority has set out the economic case for early years interventions to reduce health inequalities in London (GLA Economics 2011).
- The experience of the 10 pilot sites for the Family Nurse Partnership programme in England has been evaluated, detailing the health impacts and cost issues (Barnes *et al* 2008).
- The National Foundation for Educational Research has published a guide that develops a business case for early interventions and considers their value for money (Durbin *et al* 2011).
- The recently established Early Intervention Foundation (2013), whose mission is to champion and support early interventions to tackle the root causes of social problems among children and young people, will work with 20 local authorities initially. In the longer term it aims to become an enabler and knowledge hub for all local authorities to support their early years services.
- The health impacts and cost-benefit case for early learning for 2 year olds in the United Kingdom (Department for Health 2013). The HighScope Perry PreSchool Programme in the United States examined the lives of 123 children born in poverty and at high risk of failing in school (Schweinhart *et al* 2005). The UK evaluation of the Effective Provision of Pre-school Education (EPPE) has shown good results (Sylvia *et al* 2004).
- The Local Government Association (LGA) commissioned the National Foundation for Educational Research to conduct a review of early interventions to assess impact and value for money, which includes numerous case studies (Easton and Gee 2012).
- The Social Care Institute for Excellence (SCIE) published a review of decision-making for early intervention in local authorities, which includes seven case studies covering innovative approaches (Anderson 2013).
- The LGA's report, *Bright Futures: Local children, local approaches*, shares good practice and learning on how local councils have worked with children's centres, including four case studies of how councils have worked with health services to achieve successful early intervention (Local Government Association 2013).

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Healthy schools and pupils

Local authorities' role in mainstream education is primarily one of supporting schools. Here, we focus on what local authorities can do to help schools deliver better educational outcomes, and promote healthy behaviours among children and their families.

How education can affect health

Evidence from many countries confirms that there is a strong correlation between educational attainment, life expectancy and self-reported health, within and across generations. School is also an important setting for forming or changing health behaviours. But interventions need to be well targeted, and achieving improvements in behaviour among more deprived pupils may be more difficult and more costly ([Matrix Evidence/NICE 2008](#)).

- Four more years of schooling reduces mortality rates by 16 per cent – equivalent to the life-expectancy gap between men and women – and reduces risks of heart disease and diabetes ([Lleras-Muney and Cutler 2006](#)).
- Those with less education report being in poorer health; they are more likely to smoke, more likely to be obese and suffer alcohol harm ([Department of Health 2008](#)).
- England has some of the widest education-related inequalities in self-assessed health in Europe, particularly for women; out of 19 countries, only Slovakia and the Czech Republic fare worse ([Mackenbach et al 2007](#)).
- Better education for parents improves health outcomes for their offspring. The introduction of reforms to increase school leaving age for girls in the 1970s led to a reduction in overweight boys ([Nakamura 2012](#)).
- Only half of 7 year olds are getting the recommended levels of physical activity with girls doing less well than boys ([Griffiths et al 2013](#)); schools have an important part to play.

Possible priority actions

There is much that can be done to reduce conduct disorders and exclusions, as well as bullying, which can be extremely detrimental to a person's physical, emotional and mental health in the short and longer term. 'Whole school' approaches are important, since unhealthy behaviours cluster in children and adolescents ([MacArthur et al 2013](#); [Kipping et al 2012](#)), just as they do in adults.

To support schools to deliver better educational outcomes, local authorities can:

- learn from other successful interventions to reduce drop-out and exclusion rates, and focus on raising educational standards among the most vulnerable children and young people ([Parsons 2009](#))
- support and expect schools to take actions to reduce bullying through implementing evidence-based guidance ([Farrington and Ttofi 2010](#))
- support and expect schools to reduce the prevalence and impact of conduct disorders through programmes that have been shown to improve students' social and emotional skills, attitudes, behaviours and attainment ([NICE 2013a](#)).

To promote schools as settings for healthy behaviours, local authorities can:

- support schools to develop children's life skills such as problem-solving, and to build self-esteem and resilience to peer and media pressure, this can reduce smoking initiation by 12 per cent (McLellan and Perera 2013)
- encourage schools to incorporate more physical activity into the curriculum. Some programmes have succeeded in increasing children's moderate and vigorous activity levels threefold, and reducing hours spent watching TV at home
- help schools promote healthy diets, focusing on 6–12 year olds. Overall impacts in terms of reducing weight gains may be relatively small, but can lead to significant longer-term impacts, halving adult obesity rates (National Institute for Health and Care Excellence 2013b). Interventions can be just as effective with poorer children and can increase fruit and vegetable consumption – doubling the odds of fruit and vegetable consumption at lunch (Waters *et al* 2011) – and reduce total energy intake
- develop targeted wellness services towards clusters of children identified as being at high risk of multiple poor behaviours, rather than providing single issue services only. Schools should be encouraged to foster a strong sense of culture and belonging, and connectedness with teachers. 'Whole school' approaches to improving health behaviours are likely to be more effective (Jackson *et al* 2012; Bond *et al* 2004)
- support the use of resources such as the Department for Education's *Healthy Schools Toolkit* (2013).

The business case for different education interventions

Supporting and challenging schools to focus on achieving good social and emotional health outcomes, and enabling children to make healthy rather than unhealthy lifestyle choices, provides substantial paybacks to individuals, society and local authorities. The overall health benefits of a good education have been estimated to provide returns of up to £7.20 for every £1 invested (Lleras-Muney and Cutler 2006).

Schools that focus on developing pupils' social skills and emotional health can provide long-term paybacks to society through the creation of well-adjusted adults. For instance, school-wide anti-bullying programmes can return almost £15 for every £1 invested in the longer term through higher earnings, productivity and public sector revenue (Knapp *et al* 2011); interventions to tackle emotional-based learning problems in schools have paid for themselves within the first year through reductions in social service, NHS and criminal justice system costs, and have recouped £50 for every £1 spent over five years (Knapp *et al* 2011).

Behaviour change interventions in schools have also proven to be very cost-effective when considering longer-term paybacks. For example, smoking prevention programmes have recouped as much as £15 for every £1 spent (Stephens *et al* 2000) and for every £1 spent on contraception to prevent teenage pregnancy, £11 is saved through fewer costs from terminations, antenatal and maternity care (Teenage Pregnancy Associates 2011).

Further resources and case studies

- The Department for Education's *Healthy Schools Toolkit* (2013) includes guides on how to 'plan, do and review' health behaviour change initiatives to improve students' health and wellbeing, with case studies on evidence-informed practice across a range of issues, schools and geographical areas.

- Research for the Esmée Fairbairn Foundation has shown how local authorities can reduce exclusions (Parsons 2009).
- The Cochrane Collaboration has recently produced systematic reviews of school-based interventions to prevent smoking (Thomas *et al* 2013) and obesity (Waters *et al* 2011), and to promote physical activity and fitness (Dobbins *et al* 2013).
- The National Institute for Health and Care Excellence (NICE) has produced a range of public health guidance for teachers, school governors and others whose remit includes improving children's health and wellbeing. The guides cover preventing and reducing alcohol use (National Institute for Health and Clinical Excellence 2007b), reducing substance misuse among vulnerable young people (National Institute for Health and Clinical Excellence 2007a), promoting social and emotional wellbeing in primary and secondary schools (National Institute for Health and Clinical Excellence 2008, 2009b), promoting physical activity (National Institute for Health and Clinical Excellence 2009a), and school-based interventions to prevent smoking (National Institute for Health and Clinical Excellence 2010) and obesity (National Institute for Health and Care Excellence 2013b).
- NICE is currently updating its tobacco return on investment tool (to include youth prevention) (National Institute for Health and Care Excellence 2013c), and developing similar tools for alcohol and physical activity.
- The London Healthy Schools Programme (Healthy Schools London, no date) provides an awards scheme for London schools that have achieved various levels of success using its healthy school resources and tools. The website has links to evidence and case studies from a range of schools.

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Helping people find good jobs and stay in work

Local authorities have both direct and indirect impacts on employment and training, employing about 2.5 million people directly but supporting many others indirectly through procurement ([Office for National Statistics 2013](#)). They are also responsible for regulating and supporting employment locally.

How employment can affect health

Injuries and stress endured in the workplace can be bad for health, but being unemployed can lead to poor physical and mental health, across all age groups, with major impacts for the individual concerned, their spouse and family. Getting back into work improves people's health, as long as it is decent work.

- Young people who are not in education, employment or training (NEET) for a substantial period are less likely to find work later in life, and more likely to experience poor long-term health ([Audit Commission 2010](#)). More than 900,000 young people aged 16–24 fell into this category across England in early 2013 – a 25 per cent increase over the past 10 years ([Department for Education 2013b](#)).
- Unemployment increases the risk of fatal or non-fatal cardiovascular disease and events, and all-cause mortality, by between 1.5 and 2.5 times ([Siegrist *et al* 2010](#)).
- One in seven men develop clinical depression within six months of losing their job ([Royal College of Psychiatrists 2013](#)), and prolonged unemployment increases the incidence of psychological problems from 16 per cent to 34 per cent ([Paul and Moser 2009](#)), with major impacts on the individual's spouse ([Marcus 2012](#)).
- More than half of people with a long-term condition say their health is a barrier to the type or amount of work they can do ([Department of Health 2012](#)).
- Poor mental health is a leading cause of worklessness and sickness absence in the United Kingdom. People living with mental illness have employment rates of between just 16 per cent and 35 per cent ([London Mental Health and Employment Partnership 2012](#)).
- Getting back into employment increases the likelihood of reporting improved health (from poor to good) almost threefold, and boosts quality of life almost twofold ([Carlier *et al* 2013](#)).
- Around 1.8 million people report suffering from an illness they believe was caused or made worse by work; 80 per cent of new cases were musculoskeletal disorders or related to stress, depression or anxiety ([Health and Safety Executive 2012](#)).
- Stress arising from work causes employers to lose 13 million working days a year. Job stress, job insecurity and lack of job control are strongly related to poorer long-term physical and mental health outcomes, increasing the risk of cardiovascular disease ([Siegrist *et al* 2010](#)), hypertension, diabetes, and unhealthy behaviours, and significantly increasing the risk of depression.

Possible priority actions

Local authorities can influence people's employment opportunities in many ways, from adopting good employment practices for their own employees, to using the Social Value Act across their commissioning. It can also commission Fit for Work and other return-to-work schemes, and work with employers in the private and independent sectors to ensure that the jobs they offer are of high quality and do not harm employees' physical or mental health.

To improve their own employees' health and adapt commissioned services to deliver social value, local authorities can:

- use the Social Value Act to maximise equitable employment opportunities, focusing on people classed as NEET and those least likely to be able to access the jobs market. Waltham Forest, for example, re-tendered its special educational needs transport services on the basis of social value resulting in the long-term unemployed getting back to work ([Social Enterprise UK 2012](#))
- improve the health of their direct employees through:
 - actively promoting health-enhancing work cultures, and adopting supportive, person-centred management styles
 - developing systems that rapidly recognise and manage ill health
 - implementing effective health promotion initiatives and encouraging employees to make healthy choices ([National Institute for Health and Clinical Excellence 2009](#))
- champion and improve the take-up of 'supported employment' and job retention schemes ([Centre for Mental Health 2013b](#)). Supported employment is significantly more effective in helping people with severe mental health illness into employment than pre-vocational training (34 per cent compared with 12 per cent) ([Crowther et al 2001](#)).

To improve health through employment more broadly, local authorities can:

- champion employment issues within health and wellbeing boards
- help more people to be 'fit for work' by incorporating lessons learned from the national pilot of Fit for Work Services into local services and commissioning
- support and challenge local businesses, through Business in the Community and other schemes, to implement National Institute for Health and Care Excellence (NICE) evidence on healthy workplaces
- support and challenge local businesses to do more to help employees lead healthier lives by signing up to the Responsibility Deal's health at work network – specifically its collective pledges on chronic conditions, mental health at work, occupational health, healthier food and behaviours, health checks, and young people in the workplace ([Department of Health 2013b](#)).

The business case for different employment interventions

Workplace injuries and ill health cost society an estimated £13.8 billion in 2010/11 (excluding cancer) ([Health and Safety Executive 2012](#)); sickness absence and worklessness cost the British economy £100 billion a year ([Black 2008](#)), and 300,000 people every year fall out of work onto health-related state benefits ([Black and Frost 2011](#)).

Evidence shows that getting people back into work and helping them 'be well' in work can help to reduce this huge economic burden ([McDaid et al 2008](#)). For example, Business in the Community has estimated that its programme of getting disadvantaged groups 'Ready

for Work⁷ provides more than £3 in benefits to society for every £1 spent over five years (*Business in the Community 2012*). This creates savings for central and local government, mainly through reduced costs associated with homelessness, crime, benefits, and health care. Employee wellness programmes have also been found to return between £2 and £10 for every £1 spent (*PricewaterhouseCoopers 2008*).

Further resources and case studies

- The Department for Education produces annual benchmarking data on the number and proportion of 16–18 year olds not in education, employment or training (NEET) across local authorities (*Department for Education 2013a*).
- The NHS Confederation has published a briefing on employment for people with a mental health condition (*NHS Confederation 2010*). NICE has produced guidance on promoting wellbeing at work, with evidence-based and practical advice for all employers, including local authorities (*National Institute for Health and Clinical Excellence 2009*).
- The Centre for Mental Health has a range of resources with advice on how to help people with mental health problems back into work, including resources for ‘mindful employers’ (*Centre for Mental Health 2013a, b, 2007*).
- The website of the Responsibility Deal’s health at work network sets out the collective pledges partners can commit to, and includes case studies of how local authorities are delivering on the alcohol, food, health at work and physical activity pledges (*Department of Health 2013a*). The Business in the Community website also has tools and resources on how employers can manage employees’ emotional wellbeing (*Business in the Community 2013*).
- The Institution of Occupational Safety and Health (IOSH) has produced guidance on promoting health and wellbeing at work, with case studies from East Sussex and Burnley about how they reduced sickness absence levels and delivered cost savings (*Institute of Occupational Safety and Health 2012*).
- The National Council for Voluntary Organisations (NCVO) has produced seven case studies of voluntary organisations that provide public services which demonstrate social value, including schemes to get people with disabilities into employment, and to help ex-prisoners find full-time employment (*National Council for Voluntary Organisations 2013*).

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Active and safe travel

Local authorities are responsible for drawing up and implementing local transport plans. Poor planning and regulation leads to preventable deaths and injuries (particularly among vulnerable groups); it also leads to air pollution, and social and economic isolation, and acts as a disincentive to people making healthier choices like cycling and walking. In this section, we focus on what local authorities can do to promote active forms of travel, and to make roads and journeys safer.

How active and safe travel can affect health

- Physical inactivity increases the risk of chronic conditions including heart disease, diabetes, and other obesity-related illnesses. Eight out of ten people do not do the recommended level of physical activity, and the poorer people are, the less likely they are to do so, which reinforces other health inequalities (Farrell *et al* 2013).
- Greater vehicle use also causes higher levels of air pollution, which may increase cardiovascular and respiratory conditions, and contributes to global climate change.
- There is a higher incidence of injury and death from traffic collisions in lower socio-economic groups; more than a quarter of child pedestrian casualties happen in the most deprived 10 per cent of wards (Power *et al* 2010).
- Traffic accidents cause around 250,000 casualties each year and kill almost 3,000 people. Those who live in the most deprived areas have a 50 per cent greater risk of dying from a road accident compared with those in the least deprived areas (Power *et al* 2010). Accident rates for children are four times higher in deprived areas.
- More than half of all serious and fatal injuries to pedestrians occur on roads with a 30mph speed limit (RoSPA 2011). On urban roads with low average speeds, any further reduction of 1mph reduces collisions by about 6 per cent.
- Cycling to work reduces the relative risk of mortality by almost 40 per cent through reducing the risk of cardiovascular disease, obesity and general health improvement, and results in lower absenteeism (Hendrikson *et al* 2010).

Possible priority actions

Nearly 80 per cent of car trips under five miles could be replaced by walking, cycling or using public transport (Cabinet Office Strategy Unit 2009). Local authorities could begin by promoting active travel among their staff, and work with major local employers across all sectors to do the same. To get people walking or cycling more, roads need to be safer and more pleasant environments; the single biggest reported barrier to cycling is a perception that it is dangerous, yet more young men die in car accidents than bike accidents.

To promote active forms of travel, local authorities can:

- work with employers to promote cycling to work, which reduces the risk of cardiovascular disease and obesity, and leads to better general health, resulting in lower absenteeism (Hendriksen *et al* 2010)
- use NICE guidance for local authorities to design and implement policies that promote cycling and walking as forms of travel or recreation (National Institute for Health and Care Excellence 2012)

- change public perceptions about cycling being dangerous by promoting the message that its health (and indeed cost) benefits outweigh the risk of accidents
- learn lessons from other successful schemes: the Cycling Demonstration Towns programme, for example, succeeded in reversing the national trend of a gradual decline in cycling levels for the first time in the United Kingdom outside London; and the Cycling City and Towns programme, implemented across 18 local authorities, included infrastructure improvements and cycle training for children and adults ([Department for Transport 2012](#)). In the private sector, GlaxoSmithKline's Cycle to Work scheme, for example, greatly increased the number of employees cycling to work, from 50 to 450, through a combination of incentives and improved facilities ([Transport for London, no date](#))
- promote the Cycle to Work scheme ([Department for Transport 2011](#)) – which reduces the upfront costs of buying a bike for commuting purposes – among local authority staff, and encourage local businesses to do the same
- work with clinical commissioning groups to jointly commission effective cycling and walking interventions, which will deliver savings for NHS budgets.

To make roads safer for pedestrians and cyclists, and reduce air pollution, local authorities can:

- create safe, attractive and enjoyable local environments, with roads that prioritise 'place' over cars to increase 'walkability', perceptions of safety, and reported quality of life. Living Streets can provide advice on community street audits to improve walkability, and authorities could support local Walking the Way to Health groups ([Living Streets 2012](#); [Walking for Health, no date](#)).
- introduce 20mph speed zones *where appropriate*. The evidence suggests that in high casualty areas, 20mph limits can reduce traffic accidents, injuries and deaths ([RoSPA 2012](#)). In London, for example, they have led to a 42 per cent reduction in casualties compared with outside areas ([Grundy et al 2008](#)). However, costs can outweigh benefits, so choosing roads and areas carefully is critical ([Steinbach et al 2013](#))
- prioritise densely populated areas with consistently high accident rates, and residential areas around common urban destinations, including developing safer routes to school (as recommended by the Royal Society for the Prevention of Accidents, RoSPA).

However, enforcement (or lack of it) is often an issue with speed limits and other safety measures. Where signs-only schemes are introduced, experience shows that other ('soft') interventions such as community engagement may be needed to maximise effectiveness ([Toy 2012](#)).

The business case for different transport interventions

The overall costs to society of transport-induced poor air quality, ill health and road accidents are huge, exceeding £40 billion; traffic accidents alone cost around £9 billion annually ([Cabinet Office 2009](#)).

Replacing car journeys with walking or cycling, and making roads and neighbourhood environments safer and more pleasant, could therefore deliver considerable savings. For instance, for every £1 spent on cycling provision, the NHS recoups £4 in reduced health costs, while the economy 'makes' 35p profit for every mile travelled by bike instead of car. If England were to match spending levels on cycling infrastructure in the Netherlands, the NHS could save £1.6 billion a year ([Burgess 2013](#)).

Breaking this down, getting just one more person to walk to school could pay back £768 (Department of Health *et al* 2011) (with savings of between £539 and £641 a year for every person who cycles instead of using their car (Davis 2012)) in terms of the health benefits to individuals, savings in NHS costs, productivity gains, and reductions in air pollution and congestion (Cabinet Office 2009; Sinnett *et al* 2011).

There are also wider benefits for local authorities and businesses. GlaxoSmithKline's Cycle to Work scheme, for example, reduced the parking space required for staff; the more consistent journey times of cyclists also contributed to improving productivity (Transport for London, no date).

Further resources and case studies

- An up-to-date systematic review of the health benefits of active travel, which looked at 24 studies from 12 countries, six of which were conducted with children (Saunders *et al* 2013).
- Living Streets has published a report reviewing the evidence for the health, economic and social benefits of better walking environments, using UK-based case studies (Sinnett *et al* 2011).
- RoSPA has produced a road safety factsheet that looks at the evidence on lower traffic speeds and health, and the effectiveness of 20mph speed zones (Royal Society for the Prevention of Accidents 2012).
- Sustrans has produced key facts and figures on physical activity and health, including the targets people should be aiming for (Sustrans, no date).
- NICE has produced guidance for local authorities on promoting cycling and walking as forms of travel and recreation (National Institute for Health and Care Excellence 2012), which summarises actions for local authorities from NICE's existing work on physical activity and other areas.
- The Physical Activity Network for the West Midlands (now part of Public Health England) has produced case studies on successful local schemes to get people more active by walking and cycling (Physical Activity Network for the West Midlands, no date).
- *Value for Money: Economic assessment of investment in walking and cycling*, compiles the best available cost-benefit evidence from the United Kingdom and abroad from recent studies that have calculated health benefits alongside other benefits such as savings in travel time, congestion and accidents (Davis 2012).
- The Department for Transport has produced a speed limit appraisal tool to help councils assess the full costs and benefits of proposed speed limit schemes (Department for Transport 2013b).
- The Department for Transport has also recently produced a circular with guidance on setting local speed limits (Department for Transport 2013a).
- Walking for Health has evaluated different walking schemes, and how they contribute to meeting NICE public health guidance (Walking for Health 2013).
- Transport for London's *Cycling for Business* report includes examples of good practice and case studies of successful Cycle to Work schemes (Transport for London, no date).
- Living Streets Scotland has published a Community Empowerment Toolkit (Living Streets Scotland 2012) to show local residents how they can improve their streets and public places, which includes numerous case studies and activities.
- Living Streets has brought together more than 20 case studies on local projects that aimed to increase walkability, with some outstanding results (Living Streets 2012).

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Warmer and safer homes

Local authorities have substantial statutory responsibilities for housing, including providing accommodation for the homeless, the elimination and replacement of poor quality stock, and ensuring the availability of affordable housing to all those who need it.

How making the home environment warmer and safer can affect health

Suitable accommodation that is safe and warm is one of the foundations of personal wellbeing, whether in childhood or old age. It enables people to access basic services, build good relationships with neighbours and others, and maintain their independence – all resulting in a better quality of life.

Among the wide range of housing services provided by local authorities, we focus here on three areas that can have a significant impact on improving health: preventing accidents in the home, making homes warmer, and preventing falls among older people.

Preventing accidents in the home among children

- Home accidents are the most common cause of death in children over the age of 1. More than 1 million children under 15 have accidents in and around the home every year that result in a visit to accident and emergency (A&E), with children aged 0–4 at highest risk (RoSPA 2013). Yet most accidents are preventable with improvements in the home environment, education or awareness-raising, and greater product safety.

Making homes warmer

- Each winter in England and Wales between 25,000 and 30,000 more people die than in the summer (Department of Health 2013; Office for National Statistics 2013), particularly those over the age of 65 (The Poverty Site, no date). Much of this is due to living in a cold house with an increased risk of cardiovascular disease, respiratory illnesses and stroke. Cold homes are usually due to poor energy efficiency and inadequate heating, mostly affecting those on low incomes. Just under 2.4 million homes were considered ‘fuel poor’ in England in 2011 (Department of Energy & Climate Change 2013).¹
- Warmth and energy improvements in poorer households with children can reduce respiratory problems, and even improve mental health (Thomson *et al* 2013; Marmot Review Team 2011; Liddell and Morris 2010).
- Caution must be taken to ensure that measures to improve insulation do not reduce ventilation, which leads to condensation, damp and mould and associated health problems among the young and old in particular, such as bronchitis and asthma.

Preventing falls among older people

As part of their social care responsibilities, local authorities may have a role to play in making homes safer.

- More than one in five homes pose risks to the people living in them. The needs of a rapidly ageing population (and the number of older people with disabilities, which is set to double by 2040 (Wittenberg *et al* 2008)) present specific challenges. Adaptations

¹ A household is considered to be fuel poor where: (1) they have required fuel costs that are above average (the national median level); and (2) were they to spend that amount, they would be left with a residual income below the official poverty line (Department of Energy & Climate Change 2013).

and mobility or other aids help people live independently for longer, yet only 2 per cent of owner-occupied homes have been adapted to meet people's needs. About a quarter of people with a serious medical condition living in rented accommodation say their homes are unsuitable for their needs (Adams and Ellison 2009).

Possible priority actions

To prevent accidents in the home, local authorities can:

- implement guidance from the National Institute for Health and Care Excellence (NICE 2010) and the Safe At Home programme (Errington *et al* 2011), which includes:
 - installing safety gates for stairs and doorways, window restrictors, and cupboard locks
 - providing non-slip bath/shower mats, corner cushions, and fireguards
 - training relevant staff (including health visitors and family support workers) and community members to run their own schemes
- prioritise high-risk groups, targeting interventions at:
 - those with children under five
 - those living in rented or overcrowded conditions
 - those on low incomes.

To help people keep their homes warmer, local authorities can:

- support the residents most in need to access and benefit from warm home funding and related schemes such as the Green Deal (HM Government 2013a), the Energy Companies Obligation (Ofgem 2013), the Warm Home Discount Scheme (HM Government 2013b) and Affordable Warmth Solutions (National Grid Affordable Warmth Solutions 2013)
- help to reduce the number of homes with poor energy ratings by installing better insulation, focusing on the private rented and owner-occupied sectors, where people are at greater risk from cold (Sreeharan *et al* 2012)
- encourage homeowners and landlords to keep homes warmer by advising them on how to save energy (eg, through home energy audits and advice (Energy Saving Trust, no date))
- help people reduce their energy bills by organising 'collective switching' schemes; these should target poorer consumers to avoid unintended outcomes (EBICO 2012), and give people information about community schemes (Energy Saving Trust 2013).

To reduce the risk of falls among older people, local authorities can:

- develop specific strategies and programmes, which have been shown to reduce falls by up to 30 per cent (NHS Confederation 2012), working with the local NHS, housing agencies, and local authority social care and housing departments
- undertake targeted risk assessments and work with home improvement agencies to provide support for older people, people with disabilities, and those on low incomes. Aids and adaptations make it possible for people to remain independent and in their own homes for longer, particularly if integrated with other social care support provided by local authorities (National Housing Federation 2013)
- consider developing handy person schemes, often provided by the local authority to support vulnerable people to improve the safety of their homes (Chaplin 2013), and link these with hospital discharge schemes to help prevent further accidents.

The business case for different interventions to make homes warmer and safer

Poor housing costs the NHS at least £2.5 billion a year in treating people with illnesses directly linked to living in cold, damp and dangerous homes (Friedman 2010). Treating children and young people injured by accidents in the home costs A&E departments across the United Kingdom around £146 million a year (National Institute for Health and Clinical Excellence 2010). Among the over-65s, falls and fractures account for 4 million hospital bed days each year in England, costing £2 billion (Royal College of Physicians 2011).

Meeting the NICE guidelines on safety assessments and installing safety equipment in homes would cost £42,000 for an average local authority. If this prevented 10 per cent of injuries, this would save £80,000 in prevented hospital admissions and emergency visits, with further savings in associated GP visits and for ambulance, police and fire services (NICE 2010). In the 10 best-performing Safe At Home scheme areas, hospital admissions fell by 29 per cent (Laser Alliance 2012). This equated to an overall saving of £27 million, while the cost of implementing the programme in these areas was just £1.7 million. Work for the Office of Disability Issues (Heywood and Turner 2007) shows that payback to health and social care of housing adaptation. Health impact assessment of housing improvements in Derby showed savings to the NHS and wider community (Building Research Establishment, no date). Birmingham City Council recently produced a health impact assessment of its two main housing-led programmes, Decent Homes and Supporting People (Birmingham City Council's Housing Strategy and Partnership Team 2011). For a total outlay of £12 million, they achieved savings of £24 million a year. The quickest wins were from improvements related to excess cold and reducing falls among older people (whether on stairs or on level ground).

Further resources and case studies

- The Chartered Institute of Environmental Health has produced a toolkit on how housing improvements can contribute to better health, with case studies (Building Research Establishment 2008).
- The evaluation report of the Warm Homes, Healthy People Fund 2011/12 includes case studies (Sreeharan *et al* 2012). Interventions ranged from home checks and emergency repairs, to practical aids such as thermometers, cold alarms and warm packs.
- The Local Government Association has produced case studies showing how local authorities have helped people reduce their energy bills through collective switching schemes (Local Government Association 2013).
- The Energy Saving Trust has produced a guide to community-run heat- and power-saving schemes, with UK-wide case studies (Energy Saving Trust 2013).
- RoSPA and Public Health England's handbook, *Delivering Accident Prevention at the Local Level in the New Public Health System* (Royal Society for the Prevention of Accidents 2013), focuses on accident prevention in the home and includes case studies of interventions targeted at children and older people.
- NICE has published guidance on preventing unintentional injury in the home for under-15s, which includes a costing report and template (National Institute for Health and Clinical Excellence 2010).

- The final evaluation report of RoSPA's Safe At Home scheme (Errington *et al* 2011) includes case studies from across England, outlining the background and partners involved, key aspects of the scheme, barriers encountered, sustainability issues, and lessons learned.
- The Department of Health has produced a best practice guide on reducing the numbers of excess winter deaths among older people, which includes housing and other interventions (Health and Inequalities National Support Team 2010).
- Research by the Department for Communities and Local Government into the financial benefits of the Supporting People programme includes a spreadsheet for working out local paybacks (Department for Communities and Local Government 2009).

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Access to green and open spaces and the role of leisure services

Public parks and open spaces usually fall under the remit of local authorities' recreation and leisure functions, which include sports and leisure centres, swimming pools and other facilities. Access to open spaces and leisure and recreational facilities has direct and indirect impacts on people's physical and mental health, but can also enable people to build social capital.

How access to green and open spaces can affect health

- A study in the Netherlands showed that every 10 per cent increase in exposure to green space translated into a reduction of five years in age in terms of expected health problems (Groenewegen *et al* 2003) with similar benefits found by studies in Canada (Villenveuve *et al* 2012) and Japan (Takano *et al* 2002).
- Green space has been linked with reduced levels of obesity in children and young people in America (Liu *et al* 2007). There is also strong evidence that access to open spaces and sports facilities is associated with higher levels of physical activity (Coombes *et al* 2010; Lee and Maheswaran 2010) and reductions in a number of long-term conditions such as heart disease, cancer, and musculoskeletal conditions (Department of Health 2012).
- The proportion of green and open space is linked to self-reported levels of health and mental health (Barton and Pretty 2010) for all ages and socio-economic groups (Maas *et al* 2006), through improving companionship, sense of identity and belonging (Pinder *et al* 2009) and happiness (White 2013).
- Living in areas with green spaces is associated with significantly less income-related health inequality, weakening the effect of deprivation on health (Mitchell and Popham 2008). In greener areas, all-cause mortality rates are only 43 per cent higher for deprived groups, compared to 93 per cent higher in less green areas.
- However, people from more deprived areas have less access; children in deprived areas are nine times less likely to have access to green space and places to play (National Children's Bureau 2013).

Possible priority actions

Local authorities can significantly influence how people use green spaces, as well as their access to leisure facilities.

To increase access to open and green spaces to improve health, local authorities can:

- work with local communities to help them develop strategic plans for green space within broader neighbourhood plans. This will help to stimulate physical activity in local communities (Astell-Burt *et al* 2013). Access to green space – particularly for lower socio-economic groups – could also be prioritised in planning developments
- work in new ways with the private and third sector through partnerships or trusts (Audit Commission 2006). The Commission for Architecture and the Built Environment has proposed funding models to ensure that the health benefits of parks are maintained (Commission for Architecture and the Built Environment 2006)
- invest in extra staffing where necessary to ensure that parks are well maintained and that anti-social behaviour does not act as a disincentive for people to enjoy the space and derive health benefits from it (Wheater *et al* 2007a, b)

- actively engage community groups and volunteers in the management and maintenance of green spaces. The 'green gym' scheme, for example, run by The Conservation Volunteers (2013), encourages people to improve their local environment and their health at the same time
- proactively plan the use of leisure facilities to maximise local residents' health. Birmingham's Be Active programme, for instance, offered free use of leisure centres during working hours and at weekends. More than half of those who signed up through the scheme were overweight or obese, and one-fifth reported poor or very poor health
- commission and support GPs to implement activities such as walking groups in green spaces, consistent with the Department of Health's *Let's Get Moving* toolkit (Department of Health 2012).

However, interventions designed to increase access to green and open spaces for disadvantaged groups requires a detailed knowledge of local needs, cultural contexts and attitudes, with clear objectives and strong targeting. For example, a scheme to increase community participation in Derbyshire's forests saw thousands more people visiting, but most were from high-income groups, thus reinforcing inequalities (O'Brien and Morris 2009).

The business case for different interventions to improve access to green space and leisure facilities

Parks and public gardens are associated with health and wellbeing at the community level, including satisfaction with 'place', increased social cohesion and interaction (Commission for Architecture and the Built Environment 2005), increases in volunteering, and opportunities for more creative 'play' among children, as well as better educational performance.

Increasing access to parks and open spaces could reduce NHS costs of treating obesity by more than £2 billion (Groundwork 2011). Access to green space can reduce mental health admissions too, resulting in additional savings for the NHS (Wheater et al 2007a, b).

Increasing access to leisure and sports facilities for local residents can also have much wider impacts. Analysis of Birmingham's city-wide Be Active programme suggests that up to £23 is recouped for every £1 spent, in terms of better quality of life, reduced NHS use, productivity gains, and other gains to local authorities (Marsh et al 2011). Economic modelling suggests this kind of intervention is a more cost-effective way of improving health through physical activity when compared with most medical interventions (Frew et al 2012). Other pricing initiatives, such as free swimming (Audrey et al 2012), also attract a high proportion of people from disadvantaged backgrounds, supporting health inequality reduction.

Further resources and case studies

- The Faculty of Public Health has produced a briefing statement, *Great Outdoors: How our natural health service uses green space to improve wellbeing* (Faculty of Public Health 2010), with advice on how to work in partnership to achieve improvements in health and wellbeing through use of green space.
- The National Obesity Observatory (2012) has produced resources on green space, parks and health.

- *Green Spaces: The benefits for London*, is an up-to-date and concise review of the health, social and economic benefits of the London Corporation's estate (BOP Consulting 2013).
- *Returning Urban Parks to their Public Health Roots*, by the Centre for Public Health of Liverpool, John Moores University, focuses on the future of parks as hubs to improve public health (Wheater *et al* 2007a, b). It includes creative options for change, including developing a 'public health park ranger' role.
- *Paying for Parks* (Commission for Architecture and the Built Environment 2006) sets out options for local authorities to maintain funding of parks, to ensure that their health benefits are not lost. Nesta's Rethinking Parks initiative will support areas to develop innovative funding models (Neal 2013).
- Greenspace Scotland has produced case studies of the social return of investment (Greenspace Scotland 2011) to parks and other green spaces.

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Strong communities, wellbeing and resilience

Local authorities have a role to play in helping individuals and communities to develop social capital. There is growing recognition that although disadvantaged social groups and communities have a range of complex and inter-related needs, they also have assets at the social and community level that can help improve health, and strengthen resilience to health problems. Several local authorities are pioneering these community asset-based approaches to improving health and building resilience for wellbeing.

How social capital and community resources can affect health

- A person's social networks can have a significant impact on their health. One large-scale international study showed that over seven years, those with adequate social relationships had a 50 per cent greater survival rate compared with individuals with poor social relationships (Holt-Lunstad *et al* 2010). Social networks have been shown to be as powerful predictors of mortality as common lifestyle and clinical risks such as moderate smoking, excessive alcohol consumption, obesity and high cholesterol and blood pressure (Pantell *et al* 2013; Holt-Lunstad *et al* 2010).
- Social support is particularly important in increasing resilience and promoting recovery from illness (Pevalin and Rose 2003). Strong social capital can also improve the chances of avoiding lifestyle risks such as smoking (Folland 2008; Brown *et al* 2006). However, in the most deprived communities, almost half of people report severe lack of support (Halpern 2004), making people who are at greater risk less resilient to the health effects of social and economic disadvantage.
- Lack of social networks and support, and chronic loneliness, produces long-term damage to physiological health via raised stress hormones, poorer immune function and cardiovascular health. Loneliness also makes it harder to self-regulate behaviour and build willpower and resilience over time, leading to engagement in unhealthy behaviours (Cacioppo and Patrick 2009).

Possible priority actions

Asset-based approaches seek to bolster wellbeing at individual and community levels, helping to increase resilience to the wider corrosive effects of the social determinants of health and risky behaviours.

To build social capital and utilise community-based assets to improve health and wellbeing, local authorities can:

- support volunteering, which is beneficial for health and wellbeing (Mundle *et al* 2013) and can reduce social isolation, exclusion and loneliness (Farrell and Bryant 2009; Sevigny *et al* 2010; Ryan-Collins *et al* 2008). There are many options, including:
 - creating health 'champions': the *Altogether Better* collaborative in Yorkshire and Humberside has trained 17,000 volunteer health champions, who are estimated to have reached more than 100,000 community members through their work, achieving outcomes on obesity, workplace absence, and unemployment, among other issues (Hex and Tatlock 2011)
 - developing befriending schemes, which can help reduce isolation, particularly for people who have spent long periods in mental health institutions and are now living independently in the community (Dean and Goodlad 1998)
 - supporting social network interventions with a focus on improving informal and formal social networks. For example, Men in Sheds (Milligan *et al* 2013), focuses on trying to engage older men at risk of isolation, who may be less likely to get involved with more traditional schemes for older people such as coffee mornings.

- work with other public services in their local area to develop an asset-based community development approach, which involves:
 - mapping local community assets as well as needs as part of the joint strategic needs assessment (JSNA) process. This approach has been piloted successfully in Wakefield ([Greetham 2011](#)), with guidance developed by NHS North West ([Nelson et al 2011](#)).
 - In Cumbria, following a community asset mapping exercise, the foundation trust has developed six new health and wellbeing hubs (along with the Centre for the Third Age in Cockermouth) providing access to low-level interventions including befriending schemes, interest groups and local outings and more targeted activity such as Singing for the Brain, or chair-based exercise classes ([Foundation Trust Network/ACEVO, no date](#)). These activities enable people to maintain their independence, and to halt the slide into isolation and health breakdown.

The business case for different interventions to support community asset approaches

Evidence on the economic paybacks of investing in community assets is as yet limited. However, there is strong and growing evidence that social networks and social capital increase people's resilience to and recovery from illness. There is less direct evidence on the wider benefits that such investments can have; studies and evaluations are lacking, and those that have been undertaken have been on a small scale.

There is better evidence on some of the individual components of a local strategic approach to building and utilising community assets ([Knapp et al 2011](#)). For example, every £1 spent on health volunteering programmes returns between £4 and £10, shared between service users, volunteers and the wider community. British Red Cross volunteers have been shown to generate cost-savings equivalent to three and a half times their costs ([Naylor et al 2013](#)). An evaluation of 15 specific community health champion projects found that they delivered a social return on investment of between around £1 and up to £112 for every £1 invested ([Hex and Tatlock 2011](#)).

Further resources and case studies

- *What Makes Us Healthy? The asset approach in practice – evidence, action, evaluation* sets out the evidence on social capital, social networks and health, and how they can build resilience to illness ([Foot 2012](#)).
- *Development of a Method for Asset-based Working*. This report, commissioned by NHS North West, focuses on developing a framework for an asset-based approach to complement needs-based assessments ([Nelson et al 2011](#)). It draws on the experience of asset-based approaches in Cumbria, Liverpool and Stockport.
- *Preventing Loneliness and Social Isolation: Interventions and outcomes*, presents evidence on the effects of loneliness and isolation on health, and reviews the impact of different interventions ([Windle et al 2011](#)).
- The Campaign to End Loneliness has produced a toolkit ([2013](#)) designed to help health and wellbeing boards address social isolation and loneliness as key determinants of the health and social care needs of older people.
- *People-centred Public Health* gives a thorough review of the evidence base, with case studies on what volunteers and lay workers such as health champions can achieve by working with their community to improve health ([South et al 2012](#)).

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Public protection and regulatory services

Effective public protection services – covering council powers of inspection, regulation and licensing – are an important component in ensuring public health and safety. Local authorities can make a difference in many areas. We focus on three: the regulation of takeaways and fast foods (a sector that has grown considerably in the past 30 years); the improvement of air quality; and fire safety.

How public protection services can affect health

Access to fast foods

- Meals eaten outside the home account for a quarter and a fifth of the calorie intake of men and women respectively. Takeaways account for a quarter of this market, producing foods that are often high in saturated fat and salt and low in fibre, which contributes to poor health (Cabinet Office 2008).
- Many (but not all) research studies have found a direct link between a fast food-rich environment and poorer health and particularly obesity (Public Health England 2013a; GLA 2012).
- Takeaway food services cluster in town and city centres and arterial roads, in areas of high socio-economic deprivation, and where unemployment is highest. In one deprived London borough, for example, a survey of schoolchildren found that more than half purchased food or drinks from fast food or takeaway outlets twice or more a week, with about 10 per cent consuming them daily (Patterson *et al* 2012).

Air quality improvement

- Improving air quality could have an enormous impact on health. The health impacts of air pollution are *greater* than the risks of passive smoking and transport accidents added together (Department of Health 2010).
- In 2008, around 29,000 deaths – more than 1 in 20 – were due to long-term exposure to air pollution (Committee on the Medical Effects of Air Pollutants 2010). These deaths were premature, with an average loss of length of life of 11.5 years, and more than 340,000 life years lost.
- Road transport is responsible for up to 70 per cent of air pollutants in urban areas. This leads to geographical inequalities in death rates as a result of air pollution, from around 3 per cent in rural areas to more than 8 per cent in parts of London (Public Health England 2013c).

Fire safety

- Fire crews attended 625,000 fires or false alarms in 2010/11; there were 388 fire-related deaths and 11,000 non-fatal injuries (Department for Communities and Local Government 2012). Cigarettes account for a large proportion of unintended fires.

Possible priority actions

Local authorities need to maximise existing resources principally through environmental health officers but also their powers to regulate types of traffic and traffic flows to ensure that they are fully contributing to public health strategies and goals.

To reduce the negative impacts of takeaways and fast foods on health, local authorities can (Public Health England 2013a; GLA 2012):

- through information, training, advice, award schemes and, where necessary, inspection and regulation, work with takeaways and the food industry to make food healthier
- work with schools to reduce the amount of fast food students consume during breaks and on journeys to and from school
- regulate the number and concentration of outlets. In particular:
 - planning permission for fast food outlets should include consideration of the potential impacts on prevention and reduction of cardiovascular disease
 - planning permission could even be restricted in certain areas (eg, within walking distance of schools)
 - there could be a review and amendment of classes of use orders to address disease prevention related to the concentration of fast food outlets.

To reduce the negative impact of air pollution on health, local authorities can (Kilbane-Dawe 2012):

- lead by example in their local area by:
 - implementing business engagement programmes to reduce air pollution
 - encouraging expansion of council-run income-generating car clubs
 - promoting zero emission ‘last mile’ delivery of as many goods and services as possible
 - organising ‘eco-driving’ training for taxi-drivers to encourage more fuel-efficient driving, and finding ways to reduce idling at taxi ranks
- invest in longer-term changes with potentially greater impacts, such as:
 - vertical roof exhausts for buses, and fitting diesel particle filters
 - rolling replacement of boilers with the least polluting models
 - ensuring that new buildings are air quality neutral
 - encouraging people to make more journeys by bike, through integrated and harmonised cycling networks.

Local authorities have considerable powers for regulating the flow and types of traffic to reduce air pollution and its health effects including the development of low emission zones. However, each case needs to be judged on its merits, to ensure that the benefits outweigh the costs (Department for Environment, Food and Rural Affairs 2007; Watkiss *et al* 2003).

To promote fire safety, local authorities can:

- find ways to incentivise people to use fire alarms in their homes and undertake home safety assessments. Evidence suggests this would reduce accidental dwelling fires (Arch and Thurston, no date)
- support the provision of wider public health interventions by fire crews. Innovative authorities, such as Merseyside Fire and Rescue have expanded their roles to deliver opportunistic health promotion interventions such as sex, drug and alcohol awareness, green gyms and gardening projects. They have a Beacon award for their contribution to reducing health inequalities (Marmot *et al* 2010, p 153).

The business case for different interventions for public protection

In 2002, the average local authority area incurred NHS costs of around £18 million to £20 million due to obesity, and a further £26 million to £30 million in lost productivity and earnings due to premature mortality (National Obesity Observatory 2010). Estimates from around the same time suggest that fires cost £6.9 billion in England and Wales (Weiner 2001; ODPM 2006).

The cost-benefit evidence for investing in air quality is substantial. A review for the London Royal Borough of Kensington and Chelsea showed that each of the options set out in the previous section on reducing air pollution is cost-beneficial, with potential for significant revenue generation, and spillover benefits including noise reduction. The overall benefit-to-cost return was £620 in benefits for every £100 spent (Kilbane-Dawe 2012). Low-emission zones can be a cost-effective way to reduce air pollution but only if well designed and tailored to local needs (Department for Environment, Food and Rural Affairs 2007).

Further resources and case studies

- *A Local Councillor's Guide to Environmental Health* provides concise guidance for elected members of local authorities to help them understand the role, function and potential of environmental health officers for improving public health (Chartered Institute of Environmental Health 2011).
- *Our Health, Our Wellbeing: Environmental health – securing a healthier future for all*, includes case studies from initiatives by 28 councils in England (Chartered Institute of Environmental Health 2012).
- The Department for Business, Innovation & Skills has recently produced a report exploring the links between regulatory activity and health outcomes, with case studies of how small-scale schemes have achieved impressive results, particularly through engaging takeaways in strategies to improve health (Department for Business, Innovation & Skills 2013).

Fast foods and takeaways

- Public Health England's Obesity Knowledge and Intelligence team (formerly the National Obesity Observatory) has produced various tools to help authorities evaluate and assess the impact of local actions (Public Health England 2013a, b).
- The Greater London Authority (GLA)'s *Takeaways Toolkit* focuses on finding relevant evidence on health impacts, working with partners to develop the local case for action, and evaluation (Greater London Authority 2012).
- *Fast Food Takeaways: A review of the wider evidence base* makes recommendations for local authorities on fast food (taking into account its role in youth culture and identity), litter, and healthier catering initiatives, among other areas (Bagwell 2013).
- There are local case studies from The Camden Good Food Partnership (Camden Council *et al* 2010), Brighton and Hove Food Partnership (Brighton and Hove Food Partnership 2012), Bristol Food Policy Council (Bristol City Council 2013), Wigan Healthy Business Team (Wigan Council 2013) and Bradford district's food strategy developed by the council and its partners (bWhatYouEat 2013).

Air quality

- Data on the percentage of premature deaths due to air pollution by local authority can be found in the benchmarking tool and map, part of the Public Health Outcomes Framework data tool ([Public Health England 2013c](#)).
- A report prepared for the Royal Borough of Kensington and Chelsea, *14 Cost Effective Actions to Cut Central London Air Pollution*, includes case studies of Low Emission Zones in London, Berlin and Oxford ([Kilbane-Dawe 2012](#)).
- A study of cost-benefit analysis of Low Emission Zones suggests they are only likely to be cost-effective for large urban authorities and if targeted towards high-pollutant vehicles ([Watkiss et al 2003](#)).
- The GLA has produced bespoke *Better Environment Better Health* guides for each London borough setting out local information on air quality and pollution and actions to take ([Greater London Authority 2013a, b](#)).

Fire safety

- The Department for Communities and Local Government has published fire statistics by local authority, which can be downloaded as Excel data to support benchmarking ([Department for Communities and Local Government 2012](#)).
- *The Economic Costs of Fire* gives revised estimates of the total cost of fire and, for the first time, of the average costs of different types of fire, disaggregated by location and cost type ([Office of the Deputy Prime Minister 2006](#); [Weiner 2001](#)).
- The Merseyside Fire and Rescue Service has won national awards for its innovative work to reduce health inequalities ([Campbell 2009](#)).

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Health and spatial planning

Good spatial planning helps improve the 'liveability' of areas (Barton 2009). The 2012 National Planning Policy Framework acknowledges the role of spatial planning in improving health, and requires local authorities to help develop the evidence base further.

Local planning authorities should work with public health leads and health organisations to understand and take account of the health status and needs of the local population... including expected future changes, and any information about relevant barriers to improving health and wellbeing.

(Department for Communities and Local Government 2012)

How spatial planning can affect health

Spatial planning is not an intervention in itself, but an enabler. How places are planned affects, for good or ill, how the other areas discussed in this resource impact on health.

- Planners have considerable potential to improve active travel and 'viability' of neighbourhoods. A higher density of shops and schools is linked to more active travel (Lee and Moudon 2008), which is in turn linked to local populations having a lower average body mass index (Brown *et al* 2008).
- Experience in the Netherlands shows that spatial planning to increase the number of people who cycle improves road safety (de Hartog *et al* 2010; Jacobsen 2003).
- Increasing access to planned green space has a positive influence on physical activity levels (Croucher *et al* 2007), particularly for those from lower socio-economic groups (Mitchell and Popham 2008). But well-planned green space also has wider effects, including reducing the heat island effect (which can protect vulnerable people from heat stress), reduction in skin damage due to tree shading, lower risk of flooding and risk of related psychological distress, reductions in noise, and reductions in air pollution (Faculty of Public Health with Natural England 2010).

Possible priority actions

Local authorities need to ensure that the health impacts of different policies are assessed and health considerations integrated into planning across all departments. This will ensure that health benefits are realised across the broad spectrum of local authority functions, rather than remaining as isolated strands of good practice.

The health and well-being of communities cannot be an afterthought. It must begin with the planning process.

(Chang *et al* 2010)

To ensure that spatial planning incorporates health issues and impacts, local authorities can:

- increase local capacity and knowledge of health and spatial planning issues, with key staff and their teams taking the lead (director of public health, environmental health service, and chief planning officer)
- use the Spatial Planning and Health Group (SPAHG)'s health checklist (Spatial Planning and Health Group 2011) when scrutinising planning strategies, plans and proposals, and implement the recommendations set out in *Planning Healthier Places* (Ross and Chang 2013)

- consider employing accessibility criteria in planning policy (for example, ensuring that new homes should be within specific distances from bus stops and ‘walkable’ distances from local shopping centres)
- be aware of how different planning decisions affect take-up of services, by carrying out robust health impact assessments. For example, recent evidence (Audrey *et al* 2012) shows that initiatives such as free swimming, while being attractive to more disadvantaged residents, were not taken up as anticipated because the distance between people’s homes and the pools proved much more of a disincentive than it was for wealthier residents.

The business case for different spatial planning interventions

It is hard to accurately measure the economic impacts of better spatial planning. However, exploratory work for the National Institute for Health and Care Excellence (NICE) (Gray *et al* 2010) suggests that the benefits of undertaking high-quality, comprehensive spatial planning significantly outweigh the costs.

NICE modelled whether high-standard spatial planning for areas such as improving walking and cycling infrastructure and retrofitting local homes with insulation were worthwhile in terms of outcomes. In both cases, outcomes significantly outweighed costs, by 60:1 for walking, 168:1 for cycling, and 50:1 for insulating local homes.

Further resources and case studies

Key resources to help local authorities ensure that spatial planning contributes to improvements in public health are detailed below.

- *Planning Healthier Places* (Ross and Chang 2013) sets out the latest policy context and case studies showing how planners are ‘designing in health’ in communities.
- The Spatial Planning and Health Group has produced *Steps to Healthy Planning: Proposals for action*, which sets out 12 action points to help local authorities integrate health and planning strategies (Spatial Planning and Health Group 2011).
- ‘Land use planning and health and well-being’, provides a good academic review of the impact of land-use planning on health outcomes (Barton 2009).
- *Reuniting Health with Planning: Healthier homes, healthier communities* is an up-to-date handbook produced by the Town and Country Planning Association. It includes case studies from Bristol, Gateshead, Knowsley, Lincolnshire, Luton and Sandwell, showing how spatial planning can improve health through integrated analysis, partnership working, and engagement with communities (Ross and Chang 2012).
- *Spatial Planning for Health: A guide to embedding the Joint Strategic Needs Assessment in spatial planning* emphasises that spatial planning should take local JSNAs into account (Chang *et al* 2010).
- *Spatial Planning & Health: Identifying barriers & facilitators to the integration of health into planning*, is a review, commissioned by NICE, of how the spatial planning system incorporates health and wellbeing effectively in its processes (Gray *et al* 2010). It includes 10 local authority case studies, plus NICE’s collation of evidence and reviews on the role of planning and health (National Institute for Health and Care Excellence 2013).

- The former NHS London's *Healthy Urban Development Unit* includes the Health and Urban Planning Toolkit (NHS London Healthy Urban Development Unit 2013). Although it was designed for boroughs and primary care trusts (PCTs) working together, it is still highly relevant despite recent organisational changes to the NHS.
- The University of the West of England's *WHO Collaborating Centre for Healthy Cities* researches and disseminates evidence and best practice, and offers short courses on designing and planning healthy urban environments (University of the West of England 2013).

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The final step

Making difficult choices: prioritising evidence-based actions that improve public health

Some local authorities are already doing a great deal to ensure that their full complement of services and activities contribute to improvements in public health. But there are very difficult decisions to be made – not least how to prioritise interventions. Based on our review of the evidence, in this concluding section we briefly explore some of the main ways to prioritise, and present a simple ready reckoner that can assist local authorities in this process.

Prioritising by the size and scope of the problem

One obvious way to prioritise is according to how much each area contributes to people's health. The individual sections give some estimates of this. But in practice, as in this resource, these impacts are often measured differently, at different points in time, and on different populations. In many instances, interventions in one area also affect others (*see below*). So while the size and scope of a particular problem can be an indicator of where to focus action, on its own it is rarely sufficient to determine priorities.

Prioritising by the interdependence of the causes of problems

Understanding the interdependencies between the wider determinants of health reviewed here should influence local authorities' decisions on where to focus. For instance, lifestyle behaviours are largely determined by wider determinants, not simply the choices that individuals make. The Institute of Health Equity at University College London (UCL) will be producing detailed guidance on this later this year (UCL Institute of Health Equity University College London, forthcoming).

One way to understand the interdependencies between different causes of ill health is to draw a path diagram or map. The Foresight Review on Obesity did this in great detail ([Butland *et al* 2007](#)), but simpler approaches can often help clarify the important linkages in the chain of influencers on health, and bring clarity on which areas are likely to have the biggest overall impact. The University of California in Los Angeles (UCLA) Health Impact Assessment Clearing House has developed resources on causal pathways for air pollution, housing, transport and other areas ([UCLA Health Impact Assessment Clearing House 2013](#)). The Association of Public Health Observatories (APHO), now part of Public Health England, has done the same for a wide array of areas for the English context ([Association of Public Health Observatories 2007](#)).

Prioritising by impact and cost-effectiveness of intervention

Despite strong evidence that the nine areas covered in this resource are important for determining public health, there is less evidence on the cost-effectiveness of different interventions in relation to their impact on health outcomes (Ogilvie et al 2005; Petticrew *et al* 2004). Filling this evidence gap must be a priority for Public Health England in future. NICE have published a tobacco return on investment tool (NICE 2013) and are developing tools for alcohol, obesity and children's use of tobacco.²

However, this should not stand in the way of adjusting the day-to-day activities of local authorities in order to improve health, since the vast majority of expenditure and costs are already committed in order to deliver non-health core objectives. From this perspective, improvements in health outcomes achieved through proven interventions will come at very little, if any additional cost. And as we have shown, the potential paybacks – to local authorities, the NHS, and society more widely – are considerable.

Prioritising through public engagement

Imposing solutions on the public will be neither welcomed nor sustainable; and what matters to the public is not always what matters to experts. Good health impact assessments move beyond the purely technical assessment of impacts on outcomes, to include community views. Health and wellbeing boards can also use guidance, resources and case studies on public engagement and priority-setting prepared by the NHS Confederation and the National Learning Network hosted on the Local Government Association (LGA)'s knowledge hub (Local Government Association 2013a; NHS Confederation 2012).

Using a simple ready reckoner tool to prioritise interventions

Through putting this resource together and reviewing the wide array of evidence, we have distilled the relative strengths of interventions in each area and set them out in the ready reckoner tool below (*see* Tables 1 and 2 overleaf). These views are subjective, but are offered with a view to helping local authorities take the first step in prioritising which interventions will deliver the best results in improving public health and reducing inequalities, given their own specific needs and challenges.

There are two tables, one considering the direct impacts of actions on health interventions, the other covering indirect impacts. The first table is based on our views on the impact of interventions in each area on the criteria selected and our view on the certainty of this. The second table gives our reflection on the interdependencies between health determinants, and how actions on one determinant affect the others.

We hope this is helpful for local authority officers and staff when considering local needs and priorities, together with the information in each section and the further resources signposted. The tables could be useful starting points for discussion and debate within each local authority, led by the public health team; the information presented is not intended to be prescriptive.

Lower scores also do not reflect that these are 'poor performers' – everything in this report is a strong candidate for action to improve population health.

² For more details contact antony.morgan@nice.org.uk

Table 1 Direct impacts of actions on health outcomes

Area	Scale of problem in relation to public health	Strength of evidence of actions	Impact on health	Speed of impact on health	Contribution to reducing inequalities
Best start in life	Highest	Highest	Highest	Longest	Highest
Healthy schools and pupils	Highest	Highest	Highest	Longer	Highest
Jobs and work	Highest	Highest	Highest	Quicker	Highest
Active and safe travel	High	High	High	Quicker	Lower
Warmer and safer homes	Highest	Highest	High	Longer	High
Access to green spaces and leisure services	High	Highest	High	Longer	Highest
Strong communities, wellbeing and resilience	Highest	High	Highest	Longer	High
Public protection	High	High	High	Quicker	High
Health and spatial planning	Highest	High	Highest	Longest	Highest

Table 2 Indirect impact of actions

Impact from...	Impact on...							
	Best start in life	Healthy schools and pupils	Jobs and work	Active and safe travel	Warmer and safer homes	Access to green spaces and leisure services	Strong communities, wellbeing and resilience	Public protection
Best start in life		Highest	Highest	Lower	Lower	Lower	Higher	Lower
Healthy schools and pupils	Lower		Highest	Lower	Lower	Lower	Higher	Lower
Jobs and work	Higher	Higher		Lower	Higher	Lower	Higher	Lower
Active and safe travel	Lower	Lower	Lower		Lower	Higher	Lower	Higher
Warmer and safer homes	Higher	Lower	Higher	Lower		Lower	Higher	Lower
Access to green spaces and leisure services	Lower	Lower	Lower	Highest	Lower		Higher	Higher
Strong communities, wellbeing and resilience	Lower	Lower	Higher	Lower	Lower	Lower		Lower
Public protection	Lower	Lower	Higher	Lower	Higher	Lower	Lower	
Health and spatial planning*	Lower	Lower	Higher	Highest	Highest	Highest	Highest	Highest

* NB: Spatial planning is not represented as an area that is affected by the others, since it 'sits outside' those areas; its crucial impact is in terms of how objectives of activities in the other areas are planned and delivered through spatial planning.

Given this, there may be several ways to read these tables, as follows.

- As a quick guide to which areas are likely to deliver in specific ways (see Table 1). For instance, taking action on helping people find good jobs, stay in work, active and safe travel, and public protection and regulatory services could deliver quick wins for improving health; whereas for reducing inequalities, the focus might best be on best start in life, healthy schools and pupils, helping people find jobs and stay in work and access to green spaces and leisure services – all supported by strong spatial planning.
- As a check on which impacts are likely to be clearer to track, or that may have potentially greater impact in the long run (see Table 2). For example, spatial planning has strong impacts on most of the other areas. Green space, on the other hand, is primarily influenced by spatial planning, and has less impact on other areas, though it contributes to active travel and public protection through its impact on air pollution.

- As a crude way to sum up the overall impact of interventions in each area. Taking early years as an example, the evidence highlighted here suggests that interventions can have significant impacts in improving public health and reducing inequalities; but they will require specific investment and may take time to deliver results. Such interventions could make an important contribution to reducing inequalities in health (*see* Table 1 above); much of the impact will come through longer-term impacts on health through improving people's access to education and employment (*see* Table 2 above).

Further resources to help prioritise

There are freely available tools based on the different approaches to prioritisation outlined above, including the following.

- *The Health England Leading Prioritisation (HELP)* tool, developed by Matrix, focuses on the cost-effectiveness of public health interventions and the impact of interventions on inequalities in health ([Matrix Knowledge 2013](#)).
- *Money Well Spent?* ([Local Government Association 2013b](#)) is a brief guide to the cost-effectiveness of public health information for councillors and officers.
- London's health and wellbeing board development programme ([Hudson and Henwood 2012](#)) developed a simple tool for boards that includes a self-scoring assessment of prioritisation.
- In early 2014, the British Academy will be publishing *If You Could do One Thing*³ based on views in nine areas where local government and others can reduce inequalities in health.
- Yorkshire and Humber Public Health Observatory summarised available prioritisation tools and provides links to case studies, in the context of primary care trusts (PCTs)' investments in public health ([Yorkshire and Humber Public Health Observatory 2010](#)).
- Notes from a discussion by the North West Transition Alliance on prioritisation and decision-making approaches are available from the National Learning Network on Health and Wellbeing Boards, hosted by the LGA's knowledge hub ([Transition Alliance 2012](#)).

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