Public Health England

Protecting and improving the nation's health

Working Together to Promote Active Travel

A briefing for local authorities

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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Summary

Walking and cycling are good for our physical and mental health. Switching more journeys to active travel will improve health, quality of life and the environment, and local productivity, while at the same time reducing costs to the public purse. These are substantial ‘win-wins’ that benefit individual people and the community as a whole.

This briefing has been written for transport planners, others concerned with the built environment, and public health practitioners. It looks at the impact of current transport systems and sets out the many benefits of increasing physical activity through active travel. It suggests that while motorised road transport has a role in supporting the economy, a rebalancing of our travel system is needed.

Some key messages when developing a healthy local transport strategy include:

- physical inactivity directly contributes to 1 in 6 deaths in the UK and costs £7.4 billion a year to business and wider society
- the growth in road transport has been a major factor in reducing levels of physical activity and increasing obesity
- building walking or cycling into daily routines are the most effective ways to increase physical activity
- short car trips (under 5 miles) are a prime area for switching to active travel and to public transport
- health-promoting transport systems are pro-business and support economic prosperity. They enable optimal travel to work with less congestion, collisions, pollution, and they support a healthier workforce

This guide suggests a range of practical action for local authorities, from overall policy to practical implementation. It highlights the importance of community involvement and sets out key steps for transport and public health practitioners.

1. Introduction

'Transport is a key driver of economic growth. It links people to their workplaces and connects businesses. It also affects health, the environment and societal wellbeing.'[1]

In October 2014, PHE published the national physical activity framework, *Everybody Active, Every Day*[2]*,* to help support a step change in the public's health. Based on international evidence of 'what works' to increase population physical activity, the framework's main focus is on walking and cycling to help increase physical activity. It highlights the economic and other benefits that would result from having a more active and healthy population.

Half of all women and a third of men in England are damaging their health due to a lack of physical activity[3]. *Everybody Active, Every Day* recognises the many ways the built and natural environment impacts on the choices people are able to make to become more physically active. It emphasises that by developing 'active environments', through 'thoughtful urban design, understanding land use patterns, and creating transportation systems that promote walking and cycling', we can help to create active, healthier, and more liveable communities.

We need to create environments which promote physical activity as a normal part of everyday life. For example, walking should be a routine form of travel, but distances walked have fallen by some 30% between the 1970s and 2013[4]. One fifth of respondents to a national survey said that they rarely or never walk for 20 minutes or more[5].

This briefing is designed for transport planners and other professionals concerned with the built environment, as well as for public health professionals. It focuses on how we can build active travel into everyday life and realise a range of benefits for health, the environment and the economy. This would be a 'win-win' for local authorities, the NHS, for individuals and their communities.

A note on methodology

This briefing draws on an existing stock of peer reviewed evidence including that used by the National Institute for Health and Care Excellence (NICE) (eg in Guidance PH8[6], PH17[7] and & PH41[8]). It was augmented by online searches for English language papers since 2000 addressing aspects of transport planning and health impacts using a range of search terms. Recent review papers and their references were scanned as a means of capturing evidence that might otherwise have been missed. The specialist knowledge of the main researcher and wider team was also drawn on to ensure that key evidence was taken into account.

2. Why is active travel so important?

Physical activity and health

Physical inactivity in England

Daily physical activity is hugely important for maintaining health,[9] and inactivity directly contributes to one in six deaths in the UK[10.]

The recommendation from the chief medical officers of the UK is clear:

- all adults should aim to be active daily. Over a week, activity should add up to at least 150 minutes (2½ hours) of moderate intensity activity in bouts of ten minutes or more
- all adults should undertake physical activity to improve muscle strength on at least two days a week and, for those at risk of falls, two sessions of balance and co-ordination exercise a week
- all children from age 5 and young people should engage in moderate to vigorous intensity physical activity for at least 60 minutes, and up to several hours every day
- all children under 5 should be physically active daily for at least 180 minutes (3 hours), spread throughout the day
- everyone should minimise the amount of time spent being sedentary (sitting) for extended periods[11]

Over a quarter of adults in England report having less than 30 minutes of physical activity a week[12]. There are wide differences across the country – for example the proportion of those with dangerously sedentary lifestyles (less than 30 minutes activity per week) is 38% in Bradford compared with 17% in Cambridge[13]. Physical activity levels are also lower than recommended in children, with only 21% of boys and 16% of girls aged 5 to 15 meeting CMO guidelines[14].

Physical activity, the under-rated ‘wonder drug’

Even small increases in physical activity among those who are the least active can bring great health benefits[15]. As the former chief medical officer noted: “The potential benefits of physical activity to health are huge. If a medication existed which had a similar effect, it would be regarded as a ‘wonder drug’ or ‘miracle cure’.“[16]

Physical activity is associated with many improvements in health and wellbeing, including lower death rates, and lower risk of heart problems and depression[17]. It benefits people of all ages, ranging from helping children maintain a healthy weight to reducing conditions such as hip fractures in frail older people[18].

The health benefits gained by regular physical activity can be very substantial indeed. Table 1 illustrates some of these.

Table 1. Summary of the relationship between physical activity and health

Health topic	Evidence of the effect of physical activity	Strength of evidence
Overall death rate	Approximately 30% risk reduction for the most active compared with the least active	Strong
Cardiovascular health	20% to 35% lower risk of cardiovascular disease, coronary heart disease and stroke	Strong
Metabolic health	30% to 40% lower risk of type 2 diabetes in at least moderately active people compared with those who are sedentary.	Strong
Musculo-skeletal health	36% to 68% risk reduction of hip fracture at the highest level of physical activity.	Moderate
Falls	Older adults who participate in regular physical activity have an approximately 30% lower risk of falls	Strong
Cancer	Approximately 30% lower risk of colon cancer and 20% lower risk of breast cancer for adults participating in daily physical activity	Strong
Mental health	Apporoximately 20% to 30% lower risk for depression and dementia for adults participating in daily physical activity.	Strong

Source: Department of Health, 2011 Start Active, Stay Active: A report on physical activity from the four home countries' Chief Medical Officers. London: DH (Table 1, adapted from work by the US Department of Health and Human Services)

The impact of road transport

Road transport and health

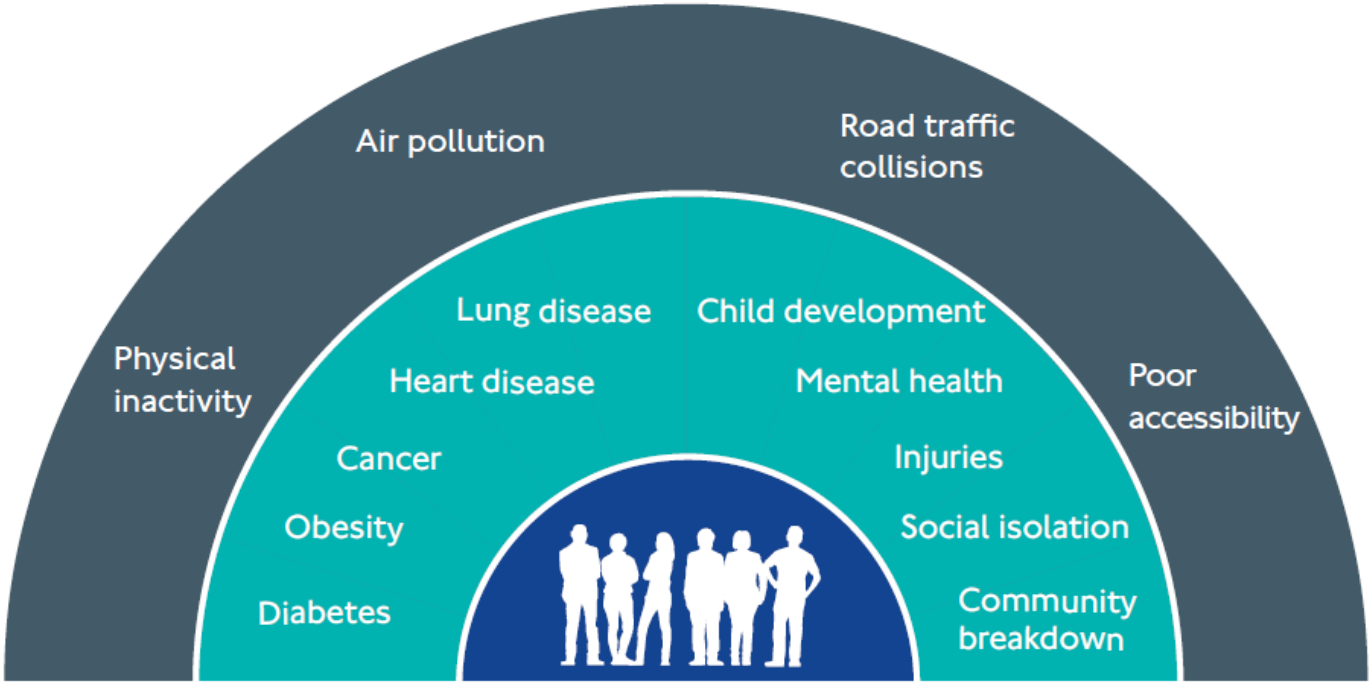
Motorised road transport provides many benefits to society. It offers comfort and convenience to those who use it and has become safer over the years. Britain's roads are generally less dangerous than those in most other countries and efforts are being made to improve this further[19].

However, the cost to society of road transport is still high, contributing to immediate and longer-term health hazards and health inequalities. These include[20]:

- increased disease burden due to reduced levels of physical activity
- road traffic collisions and injuries
- air pollution
- noise
- reduced social cohesion and increased social isolation for many

Figure 1 shows some of the effects that road transport has on health and quality of life. Some of these are direct effects (such as injuries and pollution), while others are indirect (such as the impact of reduced physical activity on obesity).

Figure 1. Key adverse links between motorised road transport and health



Source: Mayor of London & Transport for London 'Valuing the health benefits of transport schemes' Transport for London 2015 (p5).

The volume and speed of motorised traffic can also reduce opportunities for positive contacts with other residents in a neighbourhood and, for many people, can contribute to increased social isolation. A study of three streets in Bristol, for example, found that people living in a street with heavy traffic had significantly fewer friends and

acquintances on the street than those living in a quiet one[21]. The findings very largely mirror those from a US study 30 years earlier[22].

The impact of social isolation and loneliness on health is being increasingly recognised. Research based on the English Longitudinal Study of Ageing found that those experiencing high levels of social isolation had significantly higher mortality rates than those with low or average levels of isolation[23].

The public realm

Motorised road transport has also affected the planning and development of our neighbourhoods and the wider public realm. The increasing affordability and convenience of car travel has had huge impacts on the design of our towns, cities and rural communities, for example leading to the decentralisation of urban activities (such as out-of-town shopping centres and business parks).

The result is an increasing need to travel by private car to access employment and services[24]. Car travel has thus replaced many journeys formerly made by walking or cycling, as people travel longer distances more frequently. Along with the use of cars for short journeys, this is a key factor in the decline of physical activity levels over the past 40 years.

Inequalities

In general, motorised road transport tends to better serve those who are already more advantaged. The richest 10% of the population effectively receive almost four times as much public spending on their transport needs as the poorest 10% (due to their higher overall level of travelling and their greater use of cars and train services rather than buses)[25].

Disadvantaged areas also tend to have a higher density of main roads, leading to poorer air quality, higher noise levels and higher collision rates[26]. The obesogenic environment impacts most on our most disadvantaged groups, which discourages walking and cycling[27] and further exacerbates health inequalities. Furthermore residents of deprived communities tend to travel less than the better off, but feel the impact of other people's travel. In short, increasing car dependency has led to increasing unfairness[28].

Children's health

Some 2,082 children aged 0-15 were killed or seriously injured on Britain's roads in 2014[29]. As with many other public health issues, road traffic casualty rates show a steep social gradient. Children in the 10% most deprived wards are four times more likely to be hit by a car than those in the 10% least deprived[30]. There are inequalities for pedestrian casualties in other age groups too[31].

Parents' and children's concern about road traffic injury is a major contributor to physical inactivity, as parents can be reluctant to allow children out of the home without constant adult supervision. Improving access to safe and appropriate play spaces, including green space, is vital to enable more children to play outdoors[32].

Mental health and wellbeing

Figure 1 showed that road transport can influence mental health and wellbeing, factors including reduced physical activity and issues such as traffic noise and isolation. However, walking and cycling are often reported as positive experiences in terms of stress management, and most studies find that commuters who combine public transport with active travel suffer less stress.

Walking and cycling journeys are also frequently relaxing[33]. Recent UK research finds that active commuting is positively associated with wellbeing and is associated with reduced risk of feeling constantly under strain and being unable to concentrate compared to car travel[34].

Active travel: Good for the economy and the environment too

Active travel

For most people, the easiest and most acceptable forms of physical activity are those that can be built into everyday life. Examples include walking or cycling instead of travelling by car, and using stairs instead of lifts. 'Active travel' (or active transportation or mobility) means walking or cycling as an alternative to motorised transport (notably cars, motorbikes/mopeds etc) for the purpose of making everyday journeys.

Transport systems and the wider built environment play a crucial role by either promoting or hindering physical activity. Recent analysis of data from the Active People Survey has shown that people who cycle for travel purposes (ie rather than simply for

recreation) are four times as likely to meet physical activity guidelines as those who do not[35].

Given the fundamental role of active travel in increasing physical activity it is not surprising that there does seem to be an association observed that countries with the highest levels of active travel generally have the lowest obesity rates[36].

Economic and environmental issues

Physical inactivity costs the UK an estimated £7.4bn a year when the impact on the NHS, social care, sickness absence from work and other factors are taken into account[37].

Increasing physical activity meanwhile saves money by significantly easing the burden of long-term disease on health and social care services and by reducing absenteeism[38]. A feasible reduction in physical inactivity could lead to major cost savings for the nation, with 37% of these savings arising in the health sector[39].

The overall costs to society from road transport are substantial. For example, it has been estimated that half of the UK's £10bn cost per annum of air pollution comes from road transport[40]. The Cabinet Office has estimated that excess delays, accidents, poor air quality, physical inactivity, greenhouse gas emissions and some of the impacts of noise resulting from motorised road transport costs English urban areas £38-49 billion a year[41].

Evidence suggests that switching active travel for short motor vehicle trips could save £17bn in NHS costs over a 20-year period, with benefits being accrued within 2 years for some conditions. The largest cost savings would come through reductions in the expected number of cases of type 2 diabetes (annual cost to NHS from diabetes is £9bn)[42].

Evaluation of the Department for Transport funded Sustainable Travel Towns project has demonstrated a significant shift from car to more sustainable modes including walking, cycling and bus use[43]. The potential for active travel policies to deliver significant health benefits and very high value for money are documented in other government reports too[44] [45]. Some of these benefits are described in a recent publication for local authorities and are summarised in Table 2.

Table 2: The wider benefits to society associated with increased walking and cycling

Issue	Impact of active travel
Traffic congestion	Reduces ⇩
Local air quality	Improves ⇧
Carbon emissions	Reduces ⇩
Road casualties	Reduces ⇩
Social cohesion	Improves ⇧
Public realm	Improves ⇧
Quality of life	Improves ⇧

Source: Revised from NOO, 2013 A Briefing for Local Authority Elected Members

Investment in walking and cycling infrastructure or behaviour change programmes can be expected to deliver low cost, high-value dividends for individual health, the NHS, the transport system and the economy as a whole[46].

In 2008 NICE stated that it can be assumed that the long-term health and economic benefits associated with increases in cycling and walking would 'neutralise any initial (infrastructure) costs'[47]. A tool to help assess the economic impact of health benefits resulting from walking and cycling has been developed by World Health Organization

(available at http://heatwalkingcycling.org/). This is promoted by the Department for Transport and a guide to its use has recently been published for London[48].

In summary, the costs of physical inactivity to the individual, the NHS, the economy and the environment are significant. A key factor has been our (over) reliance on motorised road transport, which carries a range of costs (as well as benefits) both to our health and to quality of life in our communities.

A strategy that enables more people to become physically active has a range of benefits both to the individual and society[49]. Such a strategy must address the behaviourial and motivational aspects to support people to become more physically active.

One aspect of this is how we design, build and connect our neighbourhoods, towns and cities and the transport systems which support these[50]. The challenge remains how we can develop more ‘active environments’ which make active travel an easier, and safer choice for all members of the community.

3. Shaping the built environment to increase active travel

Because the built environment is associated with how we travel, planners and policymakers have an opportunity to make changes in that environment to promote healthier and more active communities.

It is notable that UK suburbs created in the past 20 to 30 years or so tend to exhibit high levels of car dependence and low levels of active travel, while some of the older or mixed-age neighbourhoods are less car dependent and have high levels of active travel[51].

Increasing walking and physical activity

Streets and roads make up around three quarters of all public space. Their appearance and the way they function therefore have a significant impact on people's lives. Well-designed, accessible streets can encourage people to walk or cycle more as part of their daily routines, leading to a healthier lifestyle. Streets that encourage people to linger and spend time can also provide economic benefits, for example for local retail.

Local authorities have adopted a range of strategies to increase walking in their neighbourhoods. Evidence on links between walking and the physical environment provide some clear messages for planners. It suggests that people walk more in places with mixed land use (such as retail and housing), higher population densities and highly connected street layouts. These urban forms are associated with between 25% and 100% greater likelihood of walking[52].

People can also be encouraged to walk more by interventions tailored to their needs, targeted at the most sedentary or at those most motivated to change, and delivered either at the level of the individual or household or through group based approaches[53].

Walking can often be combined with public transport, and this can provide a significant boost to physical activity levels[54] while reducing congestion, pollution and road danger. Access to public transport such as buses can be facilitated by providing affordable ticket prices, flexibility in stops, drop-steps to assist getting on and off buses, high-quality travel information, and regular and reliable services[55].

There is also a growing evidence base on the benefits of 20mph speed limits in support of this[56] and repeated national surveys show strong public support for 20mph in

residential streets[57] [58]. Many towns and cities in England have either implemented or are committed to 20mph speed limits across much of their road networks.

The *Manual for Streets* changed the government's approach to the design and provision of residential and other streets. This includes a hierarchy of provision that puts walking and cycling at the top, and following its principles can help design places that encourage active travel[59].

Increasing cycling

Robust studies have shown that a variety of approaches are associated with increases in cycling. These include:

- an intensive intervention with individuals,
- individualised marketing to households,
- improving infrastructure for cycling, and
- multifaceted town level or city level programmes[60]

Spatial factors positively associated with cycling include the presence of dedicated cycle routes or paths, separation of cycling from other traffic, high population density, short trip distance, proximity of a cycle path or green space and (for children) projects promoting 'safe routes to school'[61]. PHE and RoSPA have recently published a briefing to help people working in education, public health, school nursing, road safety and others to promote safe active travel to schools[62].

More generally when considering new developments, how we design our neighbourhoods is key to promoting healthy travel habits, not least in terms of:

- mixed use developments, where local facilities such as shops, GP practices, schools and other services are located, are important in providing short trip distances amenable to routine walking and cycling
- 'filtered permeability' (road design that still allows through-access for walking and cycling, but removes it for motor traffic) to provide direct routes for these modes, which in turn encourages active travel

Children and neighbourhoods

A key challenge is to enable children to walk or cycle to and from school safely. Action that can encourage this includes developing a school travel plan, providing training and practical support to promote safe cycling, developing walking buses and other

partnership work between schools, parents and carers, communities and the local authority[63].

Some areas have also been experimenting with allowing street closures ('street play') for set periods of time on a regular basis to encourage children to be able to play actively, independently and safely near their own front door. This can help improve children's confidence, self-esteem and resilience as well as encouraging physical activity[64]. An evaluation of play streets in Hackney found that the initiative led to an estimated 8,140 child-hours of outdoor play across 29 streets in a 12-month period. Some 1,600 children were involved[65].

Older adults and people with disabilities

The built environment is key to maintaining independence and mobility[66]. Factors that can affect older people's physical activity include pedestrian infrastructure, safety, access to amenities and services, aesthetics and environmental conditions[67]. Consultation with people with disabilities has also highlighted the importance of adequate road crossings, pavements, toilets and public seating as well as organisational and attitudinal factors to encourage walking[68].

It is important to engage people with dementia and their carers in the planning, development, and evaluation of the urban realm. For example, having frequent pedestrian crossings with increased crossing times and audible and visual cues are necessary to help people with dementia safely cross the street[69]. Small-scale improvements such as good street lighting or improved road crossings can also encourage movement[70].

Research suggests a need for constantly maintaining, improving and adapting the pedestrian environment to meet the needs of older people who are likely to be more vulnerable as pedestrians but need the ability to venture outside both for their physical and mental health and wellbeing[71].

Box 1: Traffic control measures to improve physical activity for older adults and those with disabilities

Older adults have suggested that motor traffic control measures are one of the most important environment issues to address. Factors that have been shown to impact on the travel opportunities for older people include: heavy motorised traffic; frequency and access to public transport; inadequate lighting; street conditions; air pollution; and perceived issues of safety due to traffic volume and speed and lack of infrastructure for walking and cycling. Consequences of heavy traffic such as street noise and the 'walkability' of a neighbourhood have also been shown to impact on mental wellbeing[72].

Many older adults may not feel comfortable negotiating street crossings due to problems such as un-signalled intersections and relatively long crossing distances. Studies show increased risk of a motor vehicle collision with a pedestrian over age 65 at marked crossings with no traffic signal or stop sign[73].

Recreation and total walking and physical activity have consistently been positively related to perceptions of neighbour safety and negatively related to neighbourhood problems. The design of a community has a profound effect on access to places for people without a car. Thus, senior mobility is an important consideration for community design[74].

The importance of green spaces

The presence of, and access to, green areas influences physical activity through the whole of the life-course[75]. Access to the natural environment can help increase activity and reduce obesity, with research suggesting that people with good perceived and/or actual access to green space are 24% more likely to be active[76].

The 2005 *Bristol Quality of Life in your Neighbourhood survey* showed that reported use of green space declined with increasing distance from it. People living closest to the type of green space classified as a 'formal park' were more likely to achieve recommended levels of physical activity and were less likely to be overweight or obese[77 78].

Rural communities

People living in rural areas and villages may find it as hard to be physically active as people in towns and cities. Difficulties in safely accessing many services by walking, cycling, or by public transport, can pose a real challenge in some rural areas.

A lack of pavements or cycle ways on busy rural roads can discourage use of these travel modes even when moving between towns and settlements not too far apart. A challenge for planners is to consider how access can be improved, and how the needs of walkers and cyclists can be taken into account in the design and planning of the rural road network. The Department of Transport commends adopting a 'Safe Systems approach' to build a safer road system[79], which one local authority has defined as the 'need to design a safe environment in which people can move around'[80].

One specific example which promotes physical activity is allowing cycles on buses, so people can get from one town or village to another and then use their bikes to get around at their destination point.

Travel plans

Travel plans[81] are already required for significant new developments such as housing, schools, businesses and healthcare facilities as part of the planning system to demonstrate the impact of such developments on traffic and movement of people.

Public health and transport planners can work together to ensure that such schemes demonstrate how they support shifts from private cars to forms of active travel, and promote the design of safe and attractive neighbourhoods in which people can move around.

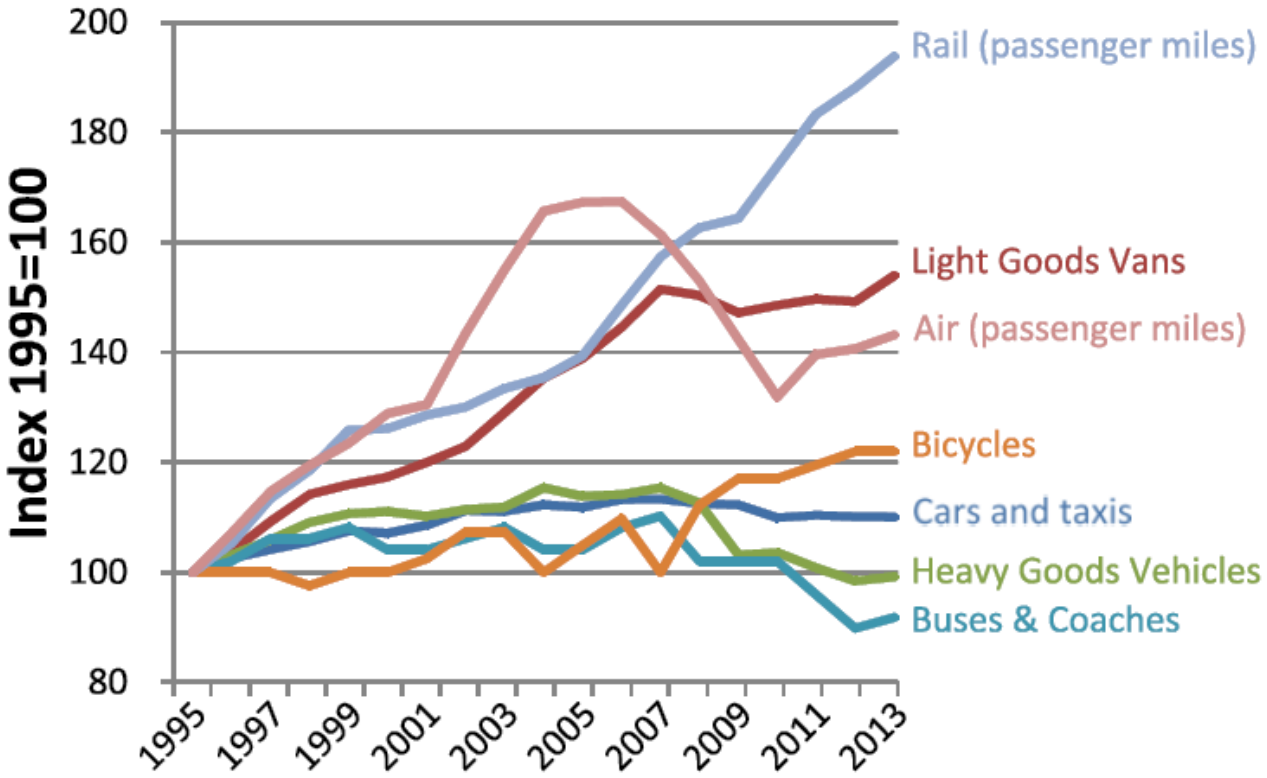
Signs of change

There are some signs of change. Figure 2 shows the changes in miles travelled by different travel modes since 1995. The total number of miles driven by car has increased, although the average number of car journeys per person in the UK fell by 12% from 1995 to 2013 (with major decreases among young people, men above the age of 30 and London residents). In contrast, the number of female drivers is increasing.

There has been a significant increase in passenger miles using rail transport and the number of cycle journeys has increased in flat, dense urban areas such as London, Cambridge, Oxford and Brighton. Factors behind cycling's popularity within London

include significant investment in cycle infrastructure, the introduction of the congestion charge and the introduction of the cycle hire scheme (which has seen annual journeys increase to over 10 million in five years).

Figure 2. Change in miles travelled by different transport modes in the UK (vehicle miles unless indicated), 1995 to 2013



Source: Houses of Parliament Parliamentary Office of Science and Technology (2015) Trends in Transport Postnote Number 496.

People of all ages increasingly want to live in walkable, mixed use, public transport-rich communities[82]. There is also evidence that car travel is becoming less popular[83] and that it has become a minority mode of travel for younger commuters[84].

The challenge now is to roll out good practice across the country.

4. Next steps: An agenda for action

There has never been a better time for public health and transport professionals to work together to shape the urban form to improve health, the economy and the environment. The return of public health to top tier local government in April 2013 has seen increasing collaboration, due both to the awareness of shared agendas and to the need to meet policy goals with less resources.

It is within the power of local transport and local planning authorities to devise policies and initiatives that maximise the potential of local assets and encourage active travel. The best way of doing this is to help build active travel into daily routines. For example, travel plans associated with new developments can support modal shifts, and indeed are required under the National Planning Policy Framework and Planning Practise Guidance for “all developments which generate significant amounts of transport movement”[85].

Pedestrians, cyclists, and users of other transport that involve physical activity need the highest priority when developing or maintaining streets and roads. This can mean re-allocating road space to support walking and cycling, restricting motor vehicle access, introducing road-user charging and traffic-calming schemes, and creating safe routes to schools and childcare settings.

The national Cycling and Walking Investment Strategy (a requirement from the Infrastructure Act 2005 – see Appendix A) is to set out actions to meet the government’s ambition for walking and cycling to become the norm for short journeys, or as part of a longer journey, with places that are designed first and foremost for people on foot or bicycle. The strategy will aim to provide local areas with a range of tools and support to develop and promote their own cycling and walking plans.

As part of the national drive to promote active travel, local areas have the opportunity to develop their own local cycling and walking investment strategy to support and deliver their objectives. In addition, local partners have the opportunity to bid into various transport funding streams. This year (2016), the Department has launched a £20 million Sustainable Travel Transition Year Fund revenue competition for 2016/17, which local authorities are invited to bid for.

The fund is open to innovative bids involving collaborative working and/or joint funding proposals between local transport and public health teams. Information about bidding can be found on the Department for Transport (DfT) website[86].

From 2017/18 the new Access Fund will provide a further opportunity for local investment in sustainable travel to work. £500 million of capital funding will be made

available for this as part of the Local Growth Fund with a further £60 million of revenue funding to be made available by the Department for Transport.

There is a need to ensure that interventions that promote and support active travel and public transport do not increase health inequalities. The risk is that participation may be greater among more affluent groups[87] although there is some positive evidence that this may not always be so[88]. Equality impact assessments can help ensure that interventions are equitable and reduce inequalities.

Box 2: An agenda for action on active travel

Key tasks – policies:

- active travel should be enshrined in transport policies
- ensure that safe, convenient, inclusive access for pedestrians, cyclists, and public transport users is maximised and is prioritised over private car use in the movement hierarchy
- focus on converting short car trips to active travel and public transport
- ensure that policies and budgets demonstrate how maximising active travel can benefit health, the economy and the environment
- encourage new developments (and retrofits) to maximise opportunities for active travel with appropriate infrastructure (eg cycle lanes, cycle parking)
- ensure that travel plans for new developments (including schools) prioritise and support active travel over car transport as part of designing safe and attractive neighbourhoods

Key tasks – implementation:

- consider how to minimise car parking as a way both to support local economies (eg local high streets) and to promote sustainable modes of transport
- ensure that new developments don't adversely affect capacity and safety of surrounding cycling networks
- support 20mph speed limits in residential areas, and promote road safety in urban and rural settlements to complement school policies on safe and active travel
- promote local 'street play' initiatives
- ensure monitoring and evaluating the use of travel plans

Key tasks – social infrastructure:

- develop and strengthen cross-sectoral working both within local authorities as well with other key local agencies
- involve and take account of the needs of different members of the community (eg people with disabilities, children and young people, older people) to create local solutions that address possible conflicts of interest and meet local community needs
- work with schools and workplaces on travel planning to promote safe modes of active travel to and from settings on a daily basis
- work with local enterprise partnerships to ensure that the economic value of active travel is considered in local developments, and demonstrate how it contributes to the functioning and prosperity of local areas – for example, developing local cycling and walking investment strategies.

Achieving change

There are structures and processes which can support more sustainable travel. Outside Greater London, local highways authorities are responsible for local transport plans (LTPs), while in London each of the boroughs have local implementation plans. The latest round of these started in 2011 and all LTPs have a minimum timescale to 2026 with each being 'refreshed' after 3 years. Refreshes provide the opportunity to advocate for policies to maximise the health benefits which will accrue from sustainable travel.

In relation to public health, joint strategic needs assessments (JSNAs) are carried out by all top tier local authorities. JSNA is a process that identifies the current and future health and wellbeing needs of a local population to inform future priorities. It can identify transport needs, among other topics, in helping to improve health outcomes. JSNAs are therefore an important means by which transport and planning colleagues can work collaboratively with public health to achieve mutual goals. Some examples of joint work are provided in a recent RoSPA document[89] that looks specifically at road safety and JSNAs. Some transport and public health teams have undertaken transport-specific JSNAs.

We have seen that there is a substantial evidence base that can be used in LTPs and JSNAs. Modelling tools such as the the World Health Organization's Health Economic Assessment Tool (HEAT) model[90] and the NICE physical activity return on investment tool[91] can also provide powerful data to demonstrate how investing in active transport systems can yield significant health and economic benefits over realisable time periods. Evidence from such tools can be used not only in policy and planning but can be used by communications and marketing programmes to help encourage healthier travel choices. Some practical steps for local practitioners include:

For transport planning practitioners

Town and transport planners are key to delivering:

- walking-friendly street layouts with better access to seating and toilets, both important for older people and people with disabilities
- high density developments around key transport nodes
- locating shops and other facilities within walking and cycling distance
- moving to 'Safe Systems' approaches in road safety and 20mph speed limits in towns and cities
- lowering speeds in villages, backed by traffic calming where necessary

Actions that transport planners can take include:

- making contact, and developing the connections, with public health leads on healthy lifestyles, physical activity, and the JSNA
- participating in the JSNA process
- drawing on public health evidence-base expertise to support and guide policies and programmes
- making joint bids for funding when opportunities arise
- understanding the connections between transport policy objectives and those of the Public Health Outcomes Framework in order to maximise the co-benefits
- working with local enterprise partnerships to make use of the services offered by the Sustainable Transport Delivery Excellence Programme[92]. This provides advice and expertise in the design of the delivery of sustainable transport projects to LEPs and respective partners

For public health practitioners

There are now some case study examples of public health teams working well with transport planning colleagues to address mutual policy goals (see Appendix B and ref[93]). These include work on:

- air quality
- cycling infrastructure improvements
- active travel corridors
- sharing dejargonised peer-reviewed evidence summaries
- embedding health practitioners into transport teams to help ensure that health impacts are better understood
- a transport and health JSNA

Public health practitioners can:

- ensure that they engage with their transport planning team and contribute to any refreshes of the LTP
- assess the scale of changes needed to bring about real improvements in health and to narrow health inequalities. Use this evidence to assess the likely impact of the LTP
- support bidding to government agencies for sustainable transport initiatives
- support the involvement of transport planning colleagues in JSNAs, health and wellbeing boards and strategies and demonstrate the links between the Public Health Outcomes Framework and transport planning goals (and with wider health, environmental, economic, and social inclusion objectives)
- provide evidence-based summaries and modelling tools such as the WHO HEAT tool on key transport issues and/or work with local university departments in providing this function.

Appendix A: The Infrastructure Act (2015) and the Cycling and Walking Investment Strategy

The government has responded to accelerate participation in cycling and walking in England through the Infrastructure Act . The Act means that there is now a statutory duty on the Secretary of State for Transport to set a Cycling and Walking Investment Strategy (CWIS) that must specify:

a. objectives to be achieved during the period to which it relates, and
b. the financial resources to be made available by the Secretary of State for the purpose of achieving those objectives[94]

In effect it provides a framework for long-term funding for cycling and walking infrastructure, placing it on a similar level of importance as roads, which should have large implications for enabling people to travel in more physically active ways for short journeys.

An initial scene-setting document was published in December 2015, outlining the timetable and approach for developing the first CWIS in 2016[95]. Underpinning the development of the strategy is a commitment to increasing the level of cycling and walking, and a desire to create places that encourage cycling and walking for short journeys or as part of a longer journey.

The first CWIS is currently being developed. New governance arrangements will be put in place to implement the strategy and oversee its ongoing delivery. The strategy will set out the government's commitment to:

- double cycling activity, and
- invest over £200 million to make cycling safer so we reduce the number of cyclists and other road users killed or injured on our roads every year.

The Department for Transport intends to consult on a draft of the first strategy in the spring, with the final strategy published in the summer. The strategy will consist of a number elements including the ambition, targets and objectives, statement on financial resources, strategy and actions, and information on governance arrangements.

Appendix B: Case studies

Bristol

The local director of public health recognised that to improve health it was important to address the range of wider health determinants. This required a spectrum of inputs from specialist experts and developing influence at different levels of the local government system, including developing political support.

A number of public health specialist staff were appointed by the director of public health to posts working inside Bristol City Council from 2008. These specialist posts addressed aspects of the built environment including transport, town planning, climate change and carbon, food systems, and determinants of physical activity. Thus, a specialist in transport planning has been in post for over 7 years (half time), which has enabled significant progress to be made in promoting greater understanding of the health impacts of road transport. Co-located firstly with traffic management, then Bristol's Cycling City team for 2 years, and since 2011 with the Transport Policy team, the specialist has been able to build a substantive level of trust with colleagues which has enabled close relationships to develop.

The specialist has regular liaison with senior transport officers and the assistant mayor with transport planning responsibilities. He is a member of both the 20mph Project Board, which oversees the roll-out of 20mph speed limits across most of the city's roads (which was originally proposed by Public Health), and the Highways Quality Assurance Project Board. Such linkages have enabled workstreams to be developed at arguably substantially faster pace than would have been possible without this long term co-located post. Other work programmes have addressed road danger reduction, and the ambition of using the WHO HEAT tool as standard practice when developing all new pedestrian and cycle schemes, including in bid documents. This continues to be developed through training sessions with officers in order to further embed an understanding of the power of routine physical activity to keep people well and have longer lives free of disease.

Key data from Bristol includes:

- cycle commuting is up 94% between 2001 and 2011, and commuting on foot is up 40%
- Bristol is rolling out 20mph on all roads where people live, and is introducing residents' parking around the city centre
- commuting by car is no longer the norm in Bristol for those aged under 40
- instrumental to these achievements has been successful use of public health evidence to support the bidding, and then successful use, of major funds from

Cycling City (£22 million) and Local Sustainable Transport Fund (over £15 million out of £34M for the West of England)
- more people in Bristol commute to work on foot or by bicycle than in any other local authority in England and Wales
- the proportion of people who walk to work does not vary greatly between ethnicities nor those with no qualifications and those with a degree or higher
- there are 44,000 people who travel less than 5km to work yet still go by car (13,000 drive less than 2km). This is bad for air quality, makes roads dangerous for children and older people, causes congestion and noise, and is bad for health

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Cambridgeshire

Cambridgeshire County Council's public health directorate and economy, transport and environment directorate have recognised the importance of working collaboratively to best address major drivers of population health such as transport and active travel, access to services and green space; and in response have developed strong links. The return of public health to local government has played a role in enabling the progression of this collaboration and driving the development of shared priorities. The core public health team, working closely with the economy, transport and environment team, are led by a consultant in public health medicine together with a senior health improvement specialist and a public health registrar.

The public health team provides input and advice to transport at a number of levels and attend the economy, transport and environment leadership team meeting attend every two weeks. The roles of the public health team in council transport activities range from providing advisory/technical input to co-development of strategies and policy, building public health perspectives and recommendations into a number of strategies and projects and at working groups listed below:

1) Active travel including:

- walk local/buggy/school projects (ensuring equal access across the county and that initiatives are aligned with needs and address inequalities)
- council-wide obesity strategy in development (to drive recommendations for increases in physical activity and active travel in areas with higher rates of obesity)
- living sport and exercise initiatives
- major sporting events, eg Tour de France (embedding of public health messaging at sporting events to encourage participation and healthy, active lifestyles)

2) Major infrastructure and growth sites

As a rapidly developing county, Cambridgeshire is host to a number of new housing and infrastructure developments. Plans are reviewed by the public health team and the team are members of the working groups linked to each development project. Priorities and recommendations from the team so far have included:

- ensuring health impact assessments are a mandatory requirement for all planning applications
- securing the facilitation of active travel as part of planning design and layout for each new development
- ensuring access to services and that public transport is accessible and in place at new developments
- advocating provision of safe pedestrian paths and cycleways across the county, particularly near schools, care facilities and town centres (in response to local resident views)

3) Local Sustainable Transport Fund allocation and prioritisation to align with public health recommendations
4) Travel for Work Guidance development
5) Transport initiatives and intervention review (evidence-base and outcomes)

The team are also members of working groups such as the Road Safety Partnership (public health staff work with NHS acute hospital trusts to map traffic injuries in the county and design interventions to minimise risk and outcomes) and the Cambridgeshire Access Group (covering all aspects of access across the county together with private and council providers, ensuring public health impacts are addressed across all levels of transport provision). An educational role within the council has allowed for greater engagement with public health staff and councillors for which the team are responsible for providing training and information on the links between transport and health at a local level.

The public health team and transport colleagues have driven two major pieces of work aimed to identify joint priorities and facilitate the development of joint strategy and policy:

- shared priorities: transport and health
- transport and health JSNA (completed) http://www.cambridgeshireinsight.org.uk/JSNA/Transport-and-Health-2014/15

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