Public Health England

Protecting and improving the nation's health

Everybody Active, Every Day

Implementation and evidence guide

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 advocacy, partnerships, world-class science, knowledge and intelligence, and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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1. Introduction

Around one in two women and a third of all men in the UK are damaging their health as a result of a lack of physical activity[1]. It's an unsustainable situation, and one that is costing the U.K an estimated £7.4 billion a year[2, 3]. If current trends continue, the burden of health and social care will destabilize public services, and take a significant toll on quality of life for individuals and communities.

- over one in four women and one in five men do less than 30 minutes of physical activity a week, and are classified as 'inactive'[1]
- physical inactivity is the fourth largest cause of disease and disability in the UK[4]

We know from the experience of countries like Finland and the Netherlands that If change is to be real and lasting we need to embed physical activity into the fabric of daily life, and to think long-term. We also need to involve all sectors in driving that change. Building upon what we know works, we can make being active every day the easy, cost-effective and 'normal' choice for every community in England.

To support making this change and to develop this overview, Public Health England has drawn on the evidence base and preceding NICE guidance. More than 1,000 individuals have helped through regional events, online contributions and a series of topic specific roundtables. We have consolidated the evidence in this document.

There is broad recognition of the scale of the challenge. Moving to a society where everyday activity is the norm will take a large-scale, sustained effort at every level, particularly of the public health system.

In some cases, work is already underway. Much of the evidence has informed the All-Party Commission on Physical Activity and the Government's Olympic Legacy report *Moving More, Living More,* as well as the Department of Health's *Public Health Responsibility Deal*.

Every action we take today will pay forward for generations to come, reducing the burden and costs of preventable death and disease in England.

There are a wide range of opportunities for organisations to move forward at pace. The time lines for impact vary from months to years to decades, but every action we take today will pay forward for generations to come and reduce the burden and cost of preventable death and disease in England.

We have clustered opportunities for action using four domains: Active society, Moving professionals, Active lives and Moving at scale.

We have prioritised in this document those actions which we feel have the strongest evidence base and most potential for implementation within the current climate. A wider range of options for action have been incorporated into the national health and wellbeing menu of interventions.

These actions run across the life course, to support local and national government and their partners to achieve the population-level shifts required to get everybody active, every day.

Many of these actions are existing policy that has been or will be implemented, others are in the evidence-based guidance from NICE. All could yield a real population-level return on investment - if implemented at scale.

PHE's regions and centres will provide support. We will also continue to develop cost-effective and practical resources and tools and set up a regional programme of networking and learning events.

It's important that we monitor cost-benefits, and PHE will also work with partners to improve evaluation systems.

The Chief Medical Officer's Guidelines on Physical Activity[5]

For early years (under 5s):

1. Physical activity should be encouraged from birth, particularly through floor-based play and water-based activities in safe environments.

2. Children of pre-school age who are capable of walking unaided should be physically active daily for at least 180 minutes (3 hours), spread throughout the day.

3. All under 5s should minimise the amount of time spent being sedentary (being restrained or sitting) for extended periods (except time spent sleeping).

These guidelines are relevant to all children under 5 years of age, irrespective of gender, race or socio-economic status, but should be interpreted with consideration for individual physical and mental capabilities.

For children and young people (5-18 years):

1. All children and young people should engage in moderate to vigorous intensity physical activity for at least 60 minutes and up to several hours every day.

2. Vigorous intensity activities, including those that strengthen muscle and bone, should be incorporated at least three days a week.

3. All children and young people should minimise the amount of time spent being sedentary (sitting) for extended periods.

Based on the evidence, the guidelines can be applied to disabled children and young people, emphasising that they need to be adjusted for each individual based on that person's exercise capacity and any special health issues or risks.

The Chief Medical Officer's Guidelines on Physical Activity[5]

For Adults:

1. 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 10 minutes or more – one way to approach this is to do 30 minutes on at least 5 days a week.
2. Alternatively, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or a combination of moderate and vigorous intensity activity.
3. Adults should also undertake physical activity to improve muscle strength on at least two days a week.
4. All adults should minimise the amount of time spent being sedentary (sitting) for extended periods.

Based on the evidence, the guidelines can be applied to disabled adults, emphasising that they need to be adjusted for each individual, based on that person's exercise capacity and any special health or risk issues.

For Older Adults (65+ years):

1. Older adults who participate in any amount of physical activity gain some health benefits, including maintenance of good physical and cognitive function. Some physical activity is better than none, and more physical activity provides greater health benefits.
2. Older 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 10 minutes or more – one way to approach this is to do 30 minutes on at least 5 days a week.
3. For those who are already regularly active at moderate intensity, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or a combination of moderate and vigorous activity.
4. Older adults should also undertake physical activity to improve muscle strength on at least two days a week.
5. Older adults at risk of falls should incorporate physical activity to improve balance and co-ordination on at least two days a week.
6. All older adults should minimise the amount of time spent being sedentary (sitting) for extended periods.

Based on the evidence, the guidelines can be applied to disabled older adults emphasising that they need to be adjusted for each individual based on that person's exercise capacity and any special health or risk issues.

2. Building on the evidence

The aim of this document is to set out the evidence base for what works: what prompts people to take the regular activity that they need to stay healthy? Most of the interventions highlighted have been shown to be effective and achievable. Unfortunately in some cases, we lack sufficient evidence that these interventions can be implemented successfully at scale. That doesn't mean they can't be: it's simply that for some interventions, there is little data available.

Where possible, we highlight the potential both of "direct" interventions (for example: referring people to 'led' walks), as well as those that focus on the wider determinants of health, for example improving the environment to make walking and cycling easy and safe.

The evidence supports inter-sectoral approaches that combine action at a number of different levels[6]. We have identified a series of key options for action at each level of the public health system which we feel could, if implemented at scale, achieve the population shift we need to improve both individual and population health and wellbeing.

3. The Evidence for Implementation

This section sets out the evidence base for implementation based on the context of implementation and the life stage.

i) The Physical environment

> "Although individuals need to be informed and motivated to adopt physical activity, the public health priority should be to ensure that environments are safe and supportive of health and wellbeing".
> *Evidence-based intervention in physical activity: lessons from around the world. Heath GW et al. Lancet. 2012 Jul 21;380(9838):272-81.*

NICE guidance on physical activity and the environment[7] emphasises that local authorities can prioritise the creation and maintenance of environments that encourage people to be active. Other benefits can include reduced traffic congestion, the revitalisation of local shops and services and increased community cohesion and social interaction.

Features of the built environment that have an impact on physical activity include:[8]

- location, density and mix of land use
- street layout and connectivity
- physical access to public services, employment, local fresh food
- safety and security
- open and green space
- affordable and energy-efficient housing
- air quality and noise
- resilience to extreme weather events
- community interaction
- transport

Road transport contributes to a number of health hazards and health inequalities, causing air pollution, noise and injuries, particularly in urban areas. More disadvantaged areas tend to have a higher density of roads and traffic.

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

creating create safe routes to schools[9]. Such policy changes have prompted substantial shifts from car transport to walking and cycling[10].

Town and transport planners are therefore key, and we hope they will work closely with public health professionals at a strategic level. Issues to tackle include walking-friendly street layouts, with better access to seating and toilets, both important for older people; high-density developments; locating shops and other facilities within walking and cycling distance. Small-scale improvements can also encourage movement, such as good street lighting or improved road crossings[11].

NICE also emphasises the importance of public open spaces in encouraging physical activity for adults and children[12]. Access to open and green space - parks, gardens, tree-lined streets, communal squares and allotments - is strategically important for quality of life and for the sustainability of towns and cities [13]. People who have close access to green space live longer than those without it, even adjusting for social class, employment and smoking. Having the open space to exercise also alleviates stress and depression and has been shown to aid mental health generally[14]. At a neighbourhood level, trees and vegetation improve residents' health, wellbeing and social safety[15].

Public green space needs to be maintained to a high standard, be safe, attractive and welcoming and be accessible on foot, bicycle and public transport[16]. Some authorities have experimented with 'gyms without walls', 'trim trails' and other outdoor exercise facilities[17]. Resources such as existing schools and leisure facilities, including playing fields, should be available to communities, especially children and young people before, during and after the school day and especially during holidays.

Building design can encourage movement through and around the building, as well as between sites. For example, there is strong evidence for the effectiveness of interventions to increase stair use[18]. NICE recommends that campus sites such as hospitals and universities encourage active travel between sites by creating pleasant and accessible routes for walking and cycling[19]. Schools need active school playgrounds; safe routes to school; and high quality, safe bicycle parking[20]. Research suggests that girls in particular are encouraged into exercise by slightly more shower room time. Similarly, workplaces can introduce practical measures such as showers for cyclists.

Much of this is not about new investment; it's about maximizing the potential of the many assets we already have in parks, leisure facilities, community halls, and workspaces, and thinking differently about the way we commission and plan public sector services.

ii) The Social environment

People are more likely to be active if that is seen as ‘normal’, and if their friends and peers are also active[21]. Large, community-wide campaigns have been effective in increasing physical activity, but only when supported by local level community activities[22].

We know that site-specific communications can work well, at key community sites such as workplaces, centres for older people, or schools and community centres. The strongest evidence for this impact comes from signs placed to encourage stair use instead of escalators[23]: Simple signs near the lifts can point out that two minutes of stair-climbing each day burns enough calories to eliminate the weight an average adult gains each year[24]. This principle can be tried in other settings. One creative example of motivation from Sweden involved painting a ‘piano’ keyboard onto stairs at the underground subway station at Odenplan, They found that people took the stairs 66 per cent more than the escalator when it was made much more fun to do it.

NICE guidance on young people and physical activity stresses the importance of marketing physical activity to young people[25]. Social marketing and new technology has a lot of potential with this group although this area is so new that it is not yet well-evaluated.

Examples might include putting together people with similar physical activity goals on social media sites or use of GPS-enabled ‘apps’ to track walking and other activities to share[26].

iii) Community-wide interventions

The main challenge for physical activity promotion is encouraging population-level behaviour change. Achieving small shifts in behaviour across whole communities could give significant public health benefits, compared to increasing activity among small, targeted groups.

Initiatives to increase social support for physical activity within communities, specific neighbourhoods, and worksites can effectively promote physical activity[27]. These can include town or city-wide programmes, in which communication activity is strongly reinforced by community-level action. For example free community physical activity classes such as fitness / aerobics in public places (parks, community centres, worksites) or fun activity sessions for children and young people. These are seen to be particularly good for underserved populations eg women, older adults and lower socioeconomic groups[28].

The UK has demonstrated some good evidence for the effectiveness of town-wide cycling and walking programmes[29]. NICE recommends implementing town-wide programmes to promote cycling for both transport and recreational purposes, linked to existing national and local initiatives[30]. These should include provision of information, including maps and route signing along with initiatives such as fun rides; recreational and sponsored group rides; school sports promotions; and links with cycle sports events cycle hire schemes.

Walking should also be encouraged at community level. For example through linking supportive infrastructure (i.e. footpaths and pedestrianised areas) to community-level walking programmes, promotions and events, such as mass participation walking groups, community challenges and 'walkathons' or group led walks[31,32].

Experiences from UK-based community-wide physical activity programmes (such as the Healthy Towns programme[33] and the Department of Health's Local Exercise Action Pilots[34]) emphasise the importance of moving beyond targeted initiatives that achieve success among people who are already motivated to change behaviour, to reach out to the wider community and achieve population-level changes.

iv) Group interventions

There is a lot of evidence that the social element behind physical activity aids enjoyment. It also encourages people to stick at it. It can be easy to promote activities to pre-existing groups, or groups to which people have been referred or recommended.

NICE recommends that inactive adults be encouraged to take up walking programmes[35].These should link to existing national and local walking initiatives such as Walking for Health[36]. They should address safety, cultural and disability issues and offer a variety of routes, paces and distances at different times of the day. They should be led by suitably trained walk leaders (paid or voluntary) and aimed at people who are currently inactive.

Other types of physical activity include Sky Rides[37] ,guided bike rides for people with little or no experience of cycling, and ParkRun[38], which are free, weekly, 5km timed runs in parks around the country. Many local authorities also offer sport and leisure opportunities specifically targeted at people new to sport and activity, especially children and young people.

Social media offers a range of opportunities for groups of people with similar physical activity goals, although there is limited evidence of their effectiveness[39].

v) One-to-one interventions

There is strong evidence for the effectiveness of counselling and brief advice in primary care in increasing physical activity[40]. NICE recommends that primary care practitioners identify adults who are inactive; deliver programmes of brief advice including follow-up; incorporate brief advice in commissioning; and implement systems to support brief advice. Any programme developed to deliver advice, encouragement or support to individuals should be based on best practice for psychological interventions. Techniques should include monitoring, feedback and support[41].

It is important to note that identifying patients and delivering advice is quite different to referring people directly to exercise facilities. The evidence for the effectiveness of this style of 'exercise referral' is not strong, and NICE guidance [draft guidance only at time of drafting] does not recommend exercise referral schemes for the sole purpose of increasing people's physical activity levels[42].

Interventions using pedometers to promote physical activity work well[43,44]. They need to be supported by well-designed programmes including feedback, support and monitoring[45].

Local authorities can also develop programmes of personalised travel plans. These aim to encourage people to change their travel habits by providing them with detailed information on possible alternatives. They involve identifying people who wish to make changes; providing them with information; and supporting them in making changes[46].

Individual approaches can also be implemented in specific settings, such as the workplace, through office-based screening and advice with telephone follow-up / community support[47].

Life course implementation

vi) Starting Well

The Chief Medical Officers of the UK recommend that physical activity should be encouraged from birth, particularly through floor-based play and water-based activities in safe environments. Pre-school children who can walk unaided should be physically active for at least 180 minutes (3 hours), spread throughout every day. All under 5s should minimise the amount of time spent being sedentary. For all these age groups, the focus is on active play rather than formal activity[48].

Schools are extremely important when it comes to children's opportunities to be active. There is evidence to support the 'whole school approach', including physical education, classroom activities, after-school sports, and promoting active transport[49]. Specific interventions in school supported by the evidence include: capacity building and staff training; increasing the number or quality of physical education classes; adjustment of interventions to target specific populations; increased activity at break times; changes in curriculum, equipment and materials provision. In addition 'walking buses' and cycling promotions can encourage increases in active travel to school[50].

The after-school period is a critical time when many children sit still for too long, watching films, playing computer games or on phones. Parents have an important role in providing opportunities and a supportive environment for children's activity, especially during weekends and holidays[51].

vii) Living Well

Promoting physical activity to adults is relatively challenging. We need to do more to look into wider physical and social settings, such as housing associations, social centres, supermarkets, mosques and churches. With 70 per cent of the adult population in employment, there is already strong evidence that workplace physical activity programmes are effective [52]. These can include flexible working policies and incentive schemes; policies to encourage employees to walk or cycle; information; ongoing advice and support or confidential, independent health checks focused on physical activity, administered by a suitably qualified practitioner[53].

Adults can be encouraged to be active alongside their children[54]. The voluntary and private sectors have done this very effectively – one example is the Rambler's Association. Successful marketing keeps the target audience in mind, especially if there are specific cultural, religious or social issues that may influence attitudes to physical activity.

viii) Ageing Well

The number of people aged 60 and over is currently 20 per cent of the population. This will rise to 24 per cent by 2030, and in the next 20 years, the number of over 80s will treble.

As people age, it can be argued that activity is more, not less important[55]. For some people, retirement can be stimulus to increase activity and try new hobbies. The good news is that it is never too late to adopt a more physically active lifestyle. There is good evidence that the benefits of physical activity apply even to older adults who have previously been inactive[56].

There is limited NICE guidance on physical activity for older people, although the adult guidance can be adapted. There is evidence that physical activity can tackle the growing problem of social isolation, in addition to the health benefits[57]. Targeted and tailored individual interventions are most likely to be successful with older people, as they address specific needs and concerns[58].

5. Research gaps

We would recommend further research specifically in the following areas:

- randomised controlled trials for group and individual interventions
- evaluation of interventions targeted at adolescence to establish sustained behaviour change
- cost-effectiveness studies which reflect cost-benefits for health, social care and other societal impacts such as educational attainment, productivity and sickness absence
- large scale population evaluation of built environment and transport infrastructure interventions

6. Options for Action

Every action we take today will pay forward for generations to come and reduce the burden and cost of preventable death and disease in England.

We have grouped what we see as opportunities for action using four domains: creating a social movement, activating professionals, creating environments for active lifestyles and active at scale.

In essence local areas should be taking five steps to support change:

- teach every child to enjoy, value and have the skills to be active every day
- build environments that are age friendly, safe for cyclists and make walking easier
- make every contact count for professionals and volunteers to encourage active lives
- lead by example in every public sector workspace
- evaluate and share the findings so that the learning of what works can grow

In this document we've highlighted those actions which we feel have the most potential and the strongest evidence base. A wider range of options for action has been incorporated into the national health and wellbeing menu of interventions.

These priority options run across the life course.

A. Active Society: creating a social movement

We need a cultural turnaround in attitudes to physical activity. The international experience in Finland and elsewhere is that there is no quick fix: we need long-term promotion of physical activity over decades. The shared vision is to get everybody active every day, driving a radical shift in the take-up of physical activity on a national scale.

This document is aimed at national and local government; schools; the transport, leisure and sports providers, community and voluntary leaders and organisations; employers and health and social care professionals

National Government

- continue at pace the cross-government and cross party commitments and leadership established in Moving More, Living More and All Party Commission recommendations to reducing physical inactivity and promoting physical activity in all relevant policies[59]
- work with Schools, Ofsted[60], and their partners to ensure full implementation of the new National Curriculum, so that no child leaves school[61] without the core skills to be competent in a broad range of physical activities and understand and apply the long-term health benefits of physical activity[62]
- lead by example, mobilising the breadth of the civil service and local government workforce to be advocates for physical activity, and support them to be active in their own lives (eg the Responsibility Deal for Physical Activity)[63]

Public Health England

- provide effective, evidence-based social marketing campaigns[64], such as Change4Life, to promote physical activity across the life course, and support tailoring of these campaigns at local level and in specific settings such as businesses and institutions
- develop and maintain a coherent national picture of physical inactivity and activity in England to monitor progress
- work through our Strategic Partners programme to support capacity building in the third sector and minority community leadership on physical activity[65]

Local Government

- lead local leadership and action to increase physical activity and reduce inactivity through Health and Wellbeing Boards, ensuring that physical activity is included in Joint Strategic Needs Assessments and Health and Wellbeing Plans, and connections are made to local Spatial and Neighbourhood Plans, Transport Plans Community Sports and Physical Activity Plans, Clinical Commissioning Group Strategic Plan and Economic Regeneration Plans [66]
- work with Local Enterprise Partnerships[67] and local Chambers of Commerce to integrate physical activity through active travel and workplace health into economic growth and infrastructure planning

- implement the national standards for the workplace wellbeing charter[68], and support local businesses to take part and work towards excellence, particularly supporting action to increase physical activity in workplaces

NHS Commissioners

- inspire local action by NHS staff by showing national leadership on physical activity and emphasising the potential return on investment for individuals and at a population level for being active every day
- integrate the ambition to increase physical activity through clinical commissioning pathways into the NHS strategic plan and delivery action plans
- demonstrate local leadership through Clinical Commissioning Groups to activate networks of professionals to promote physical activity in clinical care, such as supporting local physical activity champions in primary and secondary care

NHS Providers

- integrate physical activity into clinical assessment and techniques such as motivational interviewing into holistic care and support for all patients
- support local physical activity champions in clinical settings to help energise the environment and signpost support and activity opportunities for patients and staff
- integrate active lifestyle messages into every service, so every contact counts[69]

Schools and Higher Education

- consistently promote the benefits of healthy lifestyles across the curriculum at primary[70], secondary[71] and higher education levels, and benefits of group activities
- promote campaigns for cycling and walking to school, college or university[72]
- engage local community groups and organisations to maximise imaginative use of school, college or university facilities such as playing fields, gyms, dance halls and swimming pools

Businesses and Employers

- lead by example in implementing evidence-based interventions to promote physical activity in the workplace[73], including workplace-based NHS Health Checks, to improve staff health and wellbeing, and encourage walking and cycling to work[74], and other forms of active travel and physical activity in the workplace[75]
- sports and leisure providers promote engagement and participation among populations with the highest levels of inactivity, especially women, disabled and ethnic minorities

Voluntary and Community Organisations

- Take community leadership on promoting physical activity, especially in ethnic minority, faith and disabled communities and organisations.
- Promote understanding of physical activity in an integrated way with mainstream messaging. The leadership shown by Breakthrough Breast Cancer[76] and Macmillan[77] is a good model in promoting physical activity to reduce cancer risk

B. Moving Professionals: using networks

We already have the ideal information network; the hundreds of thousands of professionals and volunteers who work directly with the public every day and the push for *'Making Every Contact Count'*[78]. Their understanding of the need to become active every day is key to getting the nation moving.

All sectors and disciplines can play a role, not just those who already work in health. Professionals in spatial planning, social care, psychology, sport and leisure, the media, trades unions, education and business can help us bring about radical change.

National Government

- encourage learning and development opportunities across the civil service to increase the understanding of physical activity and its relationship to policy development for improving health, social and economic population outcomes
- build on existing national knowledge sharing hubs, such as the Local Sustainable Transport Fund hub, to support local action to increase physical activity and reduce inactivity

Public Health England

- work with partners to build the capacity and enthusiasm of educators as part of the wider public health workforce by promoting effective practice and signposting the tools and resources to help promote physical activity
- support wider understanding of the role and impact of physical activity through our publications and develop targeted learning and development tools for specific groups of professionals
- work through partners such as the Medical Royal Colleges, Trade Unions, Chartered Institutes and Royal Societies to prompt post-graduate training and development to increase understanding about physical activity and create the skills to support individuals becoming more active

Local Government

- improve competency and skills of health and social care staff to support older people[79], including integration of key skills around physical activity for older adults[80]
- commission training programmes for staff to promote increased physical activity[81] in early years
- Integrate physical activity into local workforce development programmes and training for staff[82]

NHS Commissioners

- require training of provider staff on the role of physical activity in the care pathway and opportunities for maximising patient care through its use
- incorporate a requirement for brief interventions training in physical activity provider contracts

NHS Providers

- ensure all health and social care staff are trained and assessed for their competence in brief interventions[83] and motivational interviewing techniques[84] for lifestyle modification eg physical activity and mental wellbeing
- create an environment which values a making every contact count approach

Schools and Higher Education

- schools and teacher training bodies to train education staff[85] to understand the link between health and wellbeing and educational attainment[86,87] and ensure they have the skills to deliver the Personal, Health and Social Education [88] curriculum effectively, identifying pupils who may need additional support
- universities working with partners to integrate understanding of the potential role of physical activity across the undergraduate curriculum, from healthcare to planning and engineering
- medical Royal Colleges, Chartered Associations, professional bodies and other professional accrediting bodies to integrate understanding of, and skills to support, physical activity into the post-graduate training offer to support professionals as they develop in their careers
- review the training needs of transport professionals in order to ensure a consistently high standard of provision of walking and cycling infrastructure on the Strategic and Local Road network

Businesses and Employers

- provide learning and development, volunteering and skills development opportunities for staff at all levels to develop their physical literacy and integrate physical activity into their daily lives
- support staff volunteering in community physical activity projects, for example as community sports coaches
- sports and leisure providers ensure that all staff have comprehensive diversity training and where appropriate additional training to facilitate activity for people with disabilities and impairments

Voluntary and Community Organisations

- integrate prevention messages into the training of volunteers and staff so every contact counts
- support training and development for community and faith leaders to energise and activate their communities to be active every day at all ages
- utilise the support available for volunteer physical activity facilitators, such as through the Walking for Health initiative[89] or Active, connected, Engaged Neighbourhoods (ACE)[90]

C. Active Lives: creating the right environments

Local authorities have a new responsibility to link local health policy with other policy strands such as planning, transport infrastructure and housing. This gives them the opportunity to create new networks of expertise, and design physical activity in from the ground up. New partnerships – for example architects and urban planners working directly with professionals in health and leisure – will find new ways to reverse the downward trends in activity levels.

There is a clear link between land use and public health in the spaces we live. Although many surveys show it's the quality, not just the quantity of public parks and spaces that make people want to walk more, there is evidence that just having access matters.

National Government

- ensure that planning[91], transport and housing policies support strong, vibrant and healthy[92] communities which prioritise physical activity and active travel
- Government to accelerate a modal shift in transport[93] from cars to walking[94], cycling[95] and public transport[96] by evaluating the case to introduce an active travel bill for England. Examine the need for a legal requirement for local authorities to map and plan for suitable routes for active travel, and to build and improve their infrastructure for walking and cycling (as in Wales)
- in national capital investment strategies and delivery plans integrate active travel planning. Plan in supporting facilities such as secure cycle storage, showers and drying facilities as core requirements[97]

Public Health England

- provide evidence about different dimensions of health and the built environment, and tools to inform local good practice
- work with the Chief Medical Officer and National Government to develop the scientific evidence of the health and social benefits of green infrastructure and active travel on air quality and climate change mitigation
- support better frameworks for evaluation of infrastructure and built environment interventions to help develop the evidence base
- develop capacity within the local public health workforce and those in spatial planning, housing, and transport planning, to maximise the impact of health and wellbeing from their work eg through secondments and joint training[98,99]

Local Government

- align the Local Plan[100] and the Health and Wellbeing Strategy informed by the JSNA[101] and plans being developed by Local Enterprise Partnerships (LEPs) which should make public health a priority in their strategic planning and investment choices [102] to deliver healthy environments
- develop coordinated, cross-sector approaches and interventions to promote walking, cycling, active transport[103,104] and active play[105], including the choice of sites for new developments for example, housing, education and health care settings[106], for all ages[107,108,109,110] through effective use of the Local Plan[111] and

other strategies such as the Department for Transport Door to Door Strategy[112] to enable active travel as part of everyday life in local communities
- deliver multi-component sport, leisure, and outdoor based on insight / co-creation work that are attractive and appropriate to the whole community (including children, young people and older people) to contribute to their opportunities to be physically active[113,114]
- use regulatory and statutory frameworks such as the Local Plan, licensing and assessments to design healthy inclusive (eg age-friendly) environments[115] that promote social interaction, physical activity[116,117] and a feeling of safety and security[118]

NHS Commissioners

- integrate a requirement for active travel plans into pre-qualifying questionnaire stage of procurement
- in capital investment strategies and delivery plans integrate active travel planning and the promotion of physical activity as a core requirement

NHS Providers

- NHS Providers and Local Authorities to put active transport plans in place for all settings and consistently implement schemes to help staff, patients and visitors to maximise active travel[119]
- NHS Providers to look to provide other opportunities for physical activity in everyday activity, such as activating stairwells and promoting activity through corporate challenges, sports leagues, fun runs, etc

Schools and Higher Education

- design playgrounds to enhance physical activity[120]
- in schools and higher education capital investment strategies and delivery plans integrate active travel planning and the supporting facilities such as changing accommodation, secure cycle storage, showers and drying facilities as core requirements[121, 122]
- support and encourage cycle training for children to keep them safe on roads

Businesses and Employers

- increase physical activity opportunities in the working day through support for active travel, or for evidence based workplace approaches[123]
- participate in the Public Health Responsibility Deal and Workplace Wellbeing Charter to learn and share with others good practice
- Participate in the national Cycle to Work Scheme and support adults to take up cycling classes and opportunities to increase their safety on the roads

Voluntary and Community Organisations

- have active travel plans and policies[124,125] for staff, volunteers and users
- increase physical activity opportunities for staff and volunteers in the working day, through support for active travel, or for evidence-based workplace approaches[126]

D. Moving at scale: making us active everyday

We need a revolution in physical activity and health. In partnership with local and national government, professionals in schools, the health sector, transportation, the sports, leisure and voluntary sectors can all be energized to achieve this common goal. We just need to light the touch paper.

Evidence shows that positive change needs to happen at every level. It needs to be measurable, permanent and consistent. It needs hardwiring into our national culture and consciousness.

Local Health and Wellbeing Boards have the knowledge and understanding of their local community and the assets they can build on to implement this guidance and make it a reality. There is ample guidance available.

Much of this is not about new investment; it's about maximizing use of the many assets we already have – the UK's legacy of parks, leisure facilities, community halls, and workspaces – and thinking differently, so that being active is at the core every day.

National Government

- DH to work in partnership across Government[127] to increase the existing effort to prevent dementia and other non-communicable diseases through industrial-scale activity on increasing physical activity and reducing inactivity[128]
- support the further development of the business case and return on investment evidence across economic, health, social care and education portfolios at a local level, to support effective allocation of resources in both urban and rural settings

Public Health England

- work with NICE and other national partners to promote evidence-based interventions to reduce inequalities and improve health, social and wellbeing outcomes across the life course which focus on active and healthy lifestyles
- work with funding bodies such as Sport England and the Arts Council, to increase the evidence base and our understanding of how participation translates into everyday activity across the life course
- provide advice and tools to support effective commissioning of health interventions and behaviour change interventions, including diet and weight management, physical activity[129], and the NHS Health Check[130] programme
- work with NHS England to optimise the public health impact of healthcare in all institutional settings, such as prisons; that improve population health outcomes

Local Government

- embed the physical activity standard evaluation framework into the commissioning of any physical activity intervention and that they align with the Department of Health *Let's Get Moving* report[131]

- support education and early years settings[132] with implementing NICE Guidance and recommendations on physical activity for children and young people, and similarly with wider services to support active older people[133,134].
- implement integrated behaviour change programmes[135] which influence behavioural change at population level to increase healthy lifestyles, promote wellbeing and reduce the burden of disease. This should include measures to help prevent cognitive decline in later life[136]
- work with NHS Commissioners to ensure that the physical activity risk assessment in clinical care pathways leads to appropriate interventions for those receiving the NHS Health Check and for those on the Chronic Disease Registers[137]

NHS Commissioners

- ensure pathways are in place to support healthy weight and diet for children and young people, and promote physical activity to children and young people[138]
- utilise community pharmacy teams to support people at every age to lead healthy lifestyles through opportunistic advice on topics including physical activity[139]
- commission services that integrate prevention, mental wellbeing[140], lifestyle modification[141,142,143,144,145] and that address or signpost to support on the social determinants of health as part of all clinical care pathways, for example physical activity throughout the care pathway for cancer[146], integrated wellness services[147] and social prescribing[148]
- embed the physical activity standard evaluation framework into the commissioning of any physical activity intervention

NHS Provider

- integrate health advice into every health and social care contact and in all care pathways - from pharmacists and physiotherapists to dental nurses and care assistants – including information on support for physical activity[149,150]
- using NICE guidance on behaviour change[151] and processes and training to make every contact count[152] for use with children and young people

Schools and Higher Education

- promote understanding and dissemination of the evidence base and through higher education support the development of the new and emerging evidence base

Businesses and Employers

- lead by example, being advocates for the evidence base for physical activity in the workplace to support staff to be active in their own lives[153] and ambitious business travel standards that promote active travel

Voluntary and Community Organisations

- lead by example, being advocates for the evidence base for physical activity in the workplace to support staff and volunteers to be active in their own lives[154]

6. PHE actions to support implementation

PHE will support the implementation of these actions at local and national level via our centres and national teams.

Alongside *Everybody Active, Every Day,* PHE is publishing new in-depth information and resource guides.

These include:

- a set of topic overview reports with more in-depth analysis of issues specific to certain groups. We will add to and expand these over the next 18 months. The first set launched alongside *Everybody Active, Every Day* include: *Older People; Children and Young People; Disability; Ethnicity; Gender; Lesbian, Gay, Bisexual and Transgender People; Data and Evaluation; and Active Places*
- a toolkit for members of parliament and local elected members, to support their role in local leadership on physical activity
- a report commissioned from Sheffield Hallam University and ukactive on promising practice interventions from across England. Using the NESTA criteria to evaluate the 960 submissions received by PHE, the academic team has identified those with the strongest published evidence of impact, and those developing strong design and evaluation
- free E-learning resources commissioned from BMJ learning. Subjects include motivational interviewing techniques to support behaviour change and nine modules on physical activity and clinical conditions, including diabetes, depression and cancer
- a definitive review of return on investment evidence for health and wider outcomes. This is commissioned from the British Heart Foundation National Centre – Physical Activity + Health and Brunel Health Economic Research Group. This will summarise the economic benefits of physical activity not only on health but the wider social benefits. The review will consider social care, regeneration, travel and transport, business and economic productivity, crime and education. The results should help those building the case for intervention locally. It will also give practical guidance on return on investment tools available for local practitioners
- PHE will also be working with professional bodies and leaders (eg Royal Colleges, Health Education England, Allied Health Professionals Networks) to develop expertise and leadership amongst health professionals

8. References

[1] Health Survey for England, 2012

[2] Scarborough P, Bhatnagar P, Wickramasinghe KK, Allender S, Foster C, Rayner M (2011) The economic burden of ill health due to diet, physical inactivity, smoking, alcohol and obesity in the UK: an update to 2006–07 NHS costs. *Journal of Public Health* 33 (4): 527-535.

[3] Ossa D and Hutton J (2002) *The economic burden of physical inactivity in England.* London: MEDTAP International.

[4] Murray *et al.* (2013) UK health performance: findings of the Global Burden of Disease Study 2010. *The Lancet* 381: 997-1020.

[5] DH (2011) *Start Active, Stay Active: A report on physical activity from the four home countries' Chief Medical Officers.*

[6] Heath GW, Parra DC, Sarmiento OL, Andersen LB, Owen N, Goenka S, Montes F, Brownson RC; Lancet Physical Activity Series Working

[7] National Institute of Health and Care Excellence. Physical activity and the environment: NICE public health guidance 8. January 2008. guidance.nice.org.uk/ph8

[8] Faculty of Public Health (2012) *Built environment and physical activity. A position statement.*

[9] National Institute of Health and Care Excellence. Physical activity and the environment: NICE public health guidance 8. January 2008.
guidance.nice.org.uk/ph8

[10] de Nazelle A, Nieuwenhuijsen MJ, Antó JM, et al. Improving health through policies that promote active travel: a review of evidence to support integrated health impact assessment. *Environ Int* 2011; **37:** 766–77.

[11] Heath GW, Parra DC, Sarmiento OL, Andersen LB, Owen N, Goenka S, Montes F, Brownson RC; Lancet Physical Activity Series Working Group.Evidence-based intervention in physical activity: lessons from around the world. Lancet. 2012 Jul 21;380(9838):272-81.

[12] NICE. Promoting physical activity for children and young people. Issued: January 2009. NICE public health guidance 17. guidance.nice.org.uk/ph17

[13] Mitchell R, Popham F, (2008). Effect of exposure to natural environment on health inequalities: an observational population study. *The Lancet* 372 (9650): pp 1655-1660.

[14] van den Berg, A.E., Hartig, T. & Staats, H. (2007) Preference for nature in urbanised societies: Stress, restoration and the pursuit of sustainability. *Journal of Social Issues*, 63, 79–96.
Chiesura, A. (2004) The role of urban parks for the sustainable city. *Landscape and Urban Planning,* 68, 129–138.

[15] Green Space Scotland (2008): Transforming Urban Spaces: the links between green spaces and health- a critical literature review
http://www.greenspacescotland.org.uk/upload/File/greenspace%20and%20quality%20of%20life%20literature%20review%20aug2008.pdf
Cooper.R et al (2008) Mental Capital and Wellbeing: Making the most of ourselves in the 21st century. State-of-Science Review: SRDR2.
The Effect of the Physical Environment on Mental Wellbeing. GO Science/ Foresight. 2008.
Bird W (2007) Natural Thinking: Investigating the links between the Natural Environment, Biodiversity and Mental Health. RSPB.

[16] National Institute of Health and Care Excellence. Physical activity and the environment: NICE public health guidance 8. January 2008. guidance.nice.org.uk/ph8

[17] Impact and Cost-Effectiveness of Family Fitness Zones: A Natural Experiment in Urban Public Parks. Deborah Cohen, Terry Marsh, Stephanie Williamson, Daniela Golinelli, Thomas L. McKenzie. Health Place. 2012 January; 18(1): 39–45.

[18] Soler RE, Leeks KD, Buchanan LR, Brownson RC, Heath GW, Hopkins DH; Task Force on Community Preventive Services. Point-of-decision prompts to increase stair use. A systematic review update. Am J Prev Med. 2010 Feb;38(2 Suppl):S292-300.

[19] National Institute of Health and Care Excellence. Physical activity and the environment: NICE public health guidance 8. January 2008. guidance.nice.org.uk/ph8

[20] NICE. Promoting physical activity for children and young people. Issued: January 2009. NICE public health guidance 17. guidance.nice.org.uk/ph17

[21] Adrian E Bauman, Rodrigo S Reis, James F Sallis, Jonathan C Wells, Ruth J F Loos, Brian W Martin, for the Lancet Physical Activity Series Working Group. Correlates of physical activity: why are some people physically active and others not? The Lancet, Volume 380, Issue 9838, Pages 258 - 271, 21 July 2012.

[22] Heath GW, Parra DC, Sarmiento OL, Andersen LB, Owen N, Goenka S, Montes F, Brownson RC; Lancet Physical Activity Series Working Group.Evidence-based intervention in physical activity: lessons from around the world. Lancet. 2012 Jul 21; 380(9838):272-81.

[23] National Institute of Health and Care Excellence. Physical activity and the environment: NICE public health guidance 8. January 2008. guidance.nice.org.uk/ph8
[24] http://www.nyc.gov/html/doh/html/pr2008/pr033-08.shtml
[25] NICE. Promoting physical activity for children and young people. Issued: January 2009. NICE public health guidance 17. guidance.nice.org.uk/ph17
[26] Vandelanotte C, Kirwan M, Rebar A, Alley S, Short C, Fallon L, Buzza G, Schoeppe S, Maher C, Duncan MJ. Int J Behav Nutr Phys Act. 2014 Aug 17;11(1):105. Examining the use of evidence-based and social media supported tools in freely accessible physical activity intervention websites.
[27] Heath GW, Parra DC, Sarmiento OL, Andersen LB, Owen N, Goenka S, Montes F, Brownson RC; Lancet Physical Activity Series Working Group.Evidence-based intervention in physical activity: lessons from around the world. Lancet. 2012 Jul 21;380(9838):272-81.
[28] Heath GW, Parra DC, Sarmiento OL, Andersen LB, Owen N, Goenka S, Montes F, Brownson RC; Lancet Physical Activity Series Working Group.Evidence-based intervention in physical activity: lessons from around the world. Lancet. 2012 Jul 21;380(9838):272-81.
[29] Ogilvie D, Egan M, Hamilton V, Petticrew M. Promoting walking and cycling as an alternative to using cars: systematic review. BMJ. 2004 Oct 2;329(7469):763.
[30] National Institute of Health and Care Excellence. Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation NICE public health guidance 41. November 2012. guidance.nice.org.uk/ph41
[31] National Institute of Health and Care Excellence. Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation NICE public health guidance 41. November 2012. guidance.nice.org.uk/ph41
[32] see for example http://www.walkingforhealth.org.uk/
[33] Sautkina E, Goodwin D, Jones A, Ogilvie D, Petticrew M, White M, Cummins S. Lost in translation? Theory, policy and practice in systems-based environmental approaches to obesity prevention in the Healthy Towns programme in England. Health Place. 2014 Jun 25;29C:60-66.
[34] Pringle A, Gilson N, McKenna J, Cooke C. An evaluation of the Local Exercise Action Pilots and impact on moderate physical activity. Health Education Journal September 2009 vol. 68 no. 3 179-185
[35] National Institute of Health and Care Excellence. Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation NICE public health guidance 41. November 2012. guidance.nice.org.uk/ph41
[36] http://www.walkingforhealth.org.uk/
[37] http://www.goskyride.com/
[38] http://www.parkrun.org.uk/
[39] Williams G, Hamm M P, Shulhan J, Vandermeer B, Hartling L. Social media interventions for diet and exercise behaviours: a systematic review and meta-analysis of randomised controlled trials. BMJ Open 2014;4:2
[40] Physical activity: brief advice for adults in primary care NICE public health guidance 44 (2013).
[41] NICE. Behaviour change: individual approaches. Issued: January 2014. NICE public health guidance 49. guidance.nice.org.uk/ph49
[42] NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE. PUBLIC HEALTH DRAFT GUIDELINE. 2014. Exercise referral schemes to promote physical activity. http://www.nice.org.uk/guidance/gid-phg76/resources/exercise-referral-schemes-draft-guideline2
[43] Effect of Pedometer-Based Physical Activity Interventions:A Meta-Analysis
Minsoo Kang, Simon J. Marshall, Tiago V. Barreira, and Jin-Oh Lee. Research Quarterly for Exercise and Sport. Vol. 80, No. 3, pp. 648–655
[44] Heath GW, Parra DC, Sarmiento OL, Andersen LB, Owen N, Goenka S, Montes F, Brownson RC; Lancet Physical Activity Series Working Group.Evidence-based intervention in physical activity: lessons from around the world. Lancet. 2012 Jul 21;380(9838):272-81.
[45] NICE. Four commonly used methods to increase physical activity. Issued: March 2006 last modified: May 2013. NICE public health guidance 2 guidance.nice.org.uk/ph2
[46] National Institute of Health and Care Excellence. Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation NICE public health guidance 41. November 2012. guidance.nice.org.uk/ph41
[47] Promoting physical activity in the workplace. Issued: May 2008. NICE public health guidance 13. guidance.nice.org.uk/ph13
[48] Start Active Stay Active. A report on physical activity for health from the four home countries' Chief Medical Officers. Dept of Health, 2011.
[49] Heath GW, Parra DC, Sarmiento OL, Andersen LB, Owen N, Goenka S, Montes F, Brownson RC; Lancet Physical Activity Series Working Group.Evidence-based intervention in physical activity: lessons from around the world. Lancet. 2012 Jul 21;380(9838):272-81.

[50] NICE. Promoting physical activity for children and young people. Issued: January 2009. NICE public health guidance 17. guidance.nice.org.uk/ph17
[51] Atkin AJ, Gorely T, Biddle SJ, Cavill N, Foster C. Interventions to promote physical activity in young people conducted in the hours immediately after school: a systematic review. Int J Behav Med. 2011 Sep;18(3):176-87.
[52] Cavill N, Coffey M, Parker M, Dugdill L. Best Practice in Promoting Employee Health and Wellbeing in the City of London. Technical Report. City of London Corporation. 2014.
[53] Promoting physical activity in the workplace. Issued: May 2008. NICE public health guidance 13. guidance.nice.org.uk/ph13
[54] NICE. Promoting physical activity for children and young people. Issued: January 2009. NICE public health guidance 17. guidance.nice.org.uk/ph17
[55] Todd C, Skelton D. (2004) *What are the main risk factors for falls among older people and what are the most effective interventions to prevent these falls?* Copenhagen, WHO Regional Office for Europe (Health Evidence Network report; http://www.euro.who.int/document/E82552.pdf, accessed 5 April 2004).
[56] Start Active Stay Active. A report on physical activity for health from the four home countries' Chief Medical Officers. Dept of Health, 2011.
[57] Windle, G. et al. (2008) *Public health interventions to promote mental well-being in people aged 65 and over: systematic review of effectiveness and cost-effectiveness*, Bangor: Institute of Medical and Social Care Research.
[58] Hobbs, N., Godfrey, A., Lara, J., Errington, L., Meyer, T.D. Rochester, L., Sniehotta, F.F. Are behavioural Interventions effective in increasing physical activity at 12-36 months in adults aged 55 – 7- years? A systematic review and meta-analysis. BMC medicine, 11(1); p 75
[59] Cabinet Office. 2014. Moving More, Living More: The Physical Activity Olympic and Paralympic Legacy for the Nation. London 2014. P4.
[60] Langford R, Bonell CP, Jones HE, Pouliou T, Murphy SM, Waters E, Komro KA, Gibbs LF, Magnus D, Campbell R. The WHO Health Promoting School framework for improving the health and well-being of students and their academic achievement. Cochrane Database of Systematic Reviews 2014, Issue 4. Art. No.: CD008958. DOI: 10.1002/14651858.CD008958.pub2
[61] Department for Education. Physical Education programmes of study: key stages 1 and 2. National Curriculum in England. London 2013.
[62] National Institute for Health and Care Excellence. PH17 Promoting physical activity for children and young people. National Institute for Health and Care Excellence, 2009
[63] National Institute for Health and Care Excellence. PH13 Promoting physical activity in the workplace. London: National Institute for Health and Care Excellence; 2008
[64] National Institute for Health and Care Excellence. PH17 Promoting physical activity for children and young people. National Institute for Health and Care Excellence, 2009
[65] National Institute for Health and Care Excellence. PH13 Promoting physical activity in the workplace. London: National Institute for Health and Care Excellence; 2008.
[66] National Institute for Health and Care Excellence. PH17 Promoting physical activity for children and young people. National Institute for Health and Care Excellence, 2009
[67] The LEP Network. http://www.lepnetwork.org.uk/leps.html
[68] Liverpool City Council. The Workplace Wellbeing Charter. http://www.wellbeingcharter.org.uk/index.php (accessed 30 June 2014).
[69] NHS. An Implementation Guide and Toolkit for Making Every Contact Count: Using every opportunity to achieve health and wellbeing. Trent Publications.
[70] Department for Education. Physical Education programmes of study: key stages 1 and 2. National Curriculum in England. London 2013.
[71] Department for Education. Physical Education programmes of study: key stages 3 and 4. National Curriculum in England. London. 2013.
[72] National Institute for Health and Care Excellence. PH17 Promoting physical activity for children and young people. National Institute for Health and Care Excellence, 2009
[73]National Institute for Health and Care Excellence. PH13 Intervention guidance on workplace health promotion with reference to physical activity. London: National Institute for Health and Care Excellence; 2008.
[74] National Institute for Health and Care Excellence. PH41 Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation. London: National Institute for Health and Care Excellence; 2012.
[75] National Institute for Health and Care Excellence. PH13 Promoting physical activity in the workplace. London: National Institute for Health and Care Excellence; 2008.
[76] http://www.breakthrough.org.uk/about-breast-cancer/breast-cancer-risk-factors/physical-activity
[77] http://www.macmillan.org.uk/Cancerinformation/Livingwithandaftercancer/Physicalactivity/Physicalactivity.aspx

[78] NHS England (2014) *An Implementation Guide and Toolkit for Making Every Contact Count: Using every opportunity to achieve health and wellbeing.* London: NHS England.
[79] Howat C, Lawrie M. Healthcare workforce skills and competencies for an ageing society. London: Age UK; 2010.
[80] National Institute for Health and Care Excellence. PH41 Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation. London: National Institute for Health and Care Excellence; 2012.
[81] National Institute for Health and Care Excellence. PH17 Promoting physical activity for children and young people. National Institute for Health and Care Excellence, 2009.
[82]National Institute for Health and Care Excellence. PH13 Intervention guidance on workplace health promotion with reference to physical activity. London: National Institute for Health and Care Excellence; 2008.
[83] National Institute for Health and Care Excellence. PH44 Physical activity: brief advice for adults in primary care. London: National Institute for Health and Care Excellence; 2013.
[84] PHE has commissioned BMJ Learning to develop a motivational interviewing skills module for launch in June/July 2014
[85]National Institute for Health and Care Excellence. PH13 Intervention guidance on workplace health promotion with reference to physical activity. London: National Institute for Health and Care Excellence; 2008.
[86] Bonell C, Humphrey N, Fletcher A, Moore L, Anderson R, Campbell R. Why schools should promote students' health and wellbeing. British Medical Journal 2014; 348(): g3078.
[87] Parsonage M, Khan L, Saunders A. Building a better future: The lifetime costs of childhood behavioural problems and the benefits of early intervention. London: Centre for Mental Health; 2014

[89] Macmillan Cancer Support, The Ramblers Association. Walking Works: how walking can help everyone lead longer, healthier and happier lives. 2013
[90] See Promising Practice report for full details
[91] National Institute for Health and Care Excellence. PH8 Physical Activity and the Environment. London: National Institute for Health and Care Excellence; 2008.
[92] (Public Health England 2013; GLA 2012), + (Lee and Moudon 2008) + (Mitchell and Popham 2008) + (Faculty of Public Health with Natural England 2010)
[93] Morrison D, Petticrew M, Thomson H. What are the most effective ways of improving population health through transport interventions? Evidence from systematic reviews. Journal of Epidemiology & Community Health 2003;57:327-333
[94] National Institute for Health and Care Excellence. PH41 Walking and cycling: guidance. London: National Institute for Health and Care Excellence; 2012.
[95] Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany. Pucher J & Buehler R. Transport Reviews, Vol. 28, No. 4, 495–528, July 2008
[96] Ogilvie D, Egan M, Hamilton V, Petticrew M. Promoting walking and cycling as an alternative to using cars: systematic review. British Medical Journal 2004;329:763-6
[97] National Institute for Health and Care Excellence. PH8 Physical Activity and the Environment. London: National Institute for Health and Care Excellence; 2008.
[98] Public Health Policy and Strategy Unit. Healthy lives, healthy people: update on the public health workforce strategy. London: Department of Health; 2014.
[99] Ross A, Chang M. Planning healthier places: Report from the Reuniting Health with Planning project. London: Town and Country Planning Association; 2013.
[100] Department for Communities & Local Government. National Planning Policy Framework for England and planning practice guidance. http://planningguidance.planningportal.gov.uk/ (accessed 30 June 2014).
[101] Tomlinson P, Hewitt S, Blackshaw N. Joining up health and planning: how Joint Strategic Needs Assessment (JSNA) can inform health and wellbeing strategies and spatial planning. Perspectives in Public Health 2013; 133(5): 254-262.
[102] Ross A, Chang M. Planning healthier places: Report from the Reuniting Health with Planning project. London: Town and Country Planning Association; 2013.
[103]National Institute for Health and Care Excellence. PH41 Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation. London: National Institute for Health and Care Excellence; 2012.
[104] National Institute for Health and Care Excellence. Evidence Update: Physical activity and the environment. National Institute for Health and Care Excellence. Report number: 57, 2014.
[105] National Institute for Health and Care Excellence. PH17 Promoting physical activity for children and young people: guidance. London: National Institute for Health and Care Excellence; 2009.
[106] National Institute for Health and Care Excellence. PH8 Physical Activity and the Environment. London: National Institute for Health and Care Excellence; 2008.

[107] Department for Communities & Local Government. Planning practice guidance. (accessed 25 June 2014).
[108] National Institute for Health and Care Excellence. PH41 Walking and cycling: guidance. London: National Institute for Health and Care Excellence; 2012.
[109] National Institute for Health and Care Excellence. PH31 Preventing unintentional road injuries among under-15s road design: full guidance. London: National Institute for Health and Care Excellence; 2010.
[110] National Institute for Health and Care Excellence. PH29 Strategies to prevent unintentional injuries among under-15s: guidance. London: National Institute for Health and Care Excellence; 2010.
[111] National Institute for Health and Care Excellence. PH29 Strategies to prevent unintentional injuries among the under-15s. London: National Institute for Health and Care Excellence; 2010.
[112] Department for Transport. Door to door strategy. 2013.
[113] National Institute for Health and Care Excellence. PH17 Promoting physical activity for children and young people: guidance. London: National Institute for Health and Care Excellence; 2009.
[114] Department of Health. Chief Medical Officer's annual report 2012: Our children deserve better: Prevention pays. Department of Health. Report number: , 2013.
[115] Ageing and Life-Course. Checklist of essential features of age-friendly cities. Geneva: World Health Organization; 2007.
[116] Nygaard I, Girts T, Fultz N, Kinchen K, Pohl G, Sternfeld B. Is urinary incontinence a barrier to exercise in women?. Obstetrics & Gynecology 2005; 106(2): 307-14.
[117] Jancey JM, Clarke A, Howat PA, Lee AH, Shilton T, Fisher J. A physical activity program to mobilize older people: A practical and sustainable approach. The Gerontologist 2007; 48(2): 251-57.
[118] Phillips J. Older people's use of unfamiliar space: Implications for urban design and spatial policy. Swansea: Swansea University; 2010. http://www.esrc.ac.uk/my-esrc/grants/res-352-25-0003/outputs/Read/b12399ee-4556-4be5-845b-72ae6dfdb12e (accessed 27 June 2014).

[119] National Institute for Health and Care Excellence. PH41 Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation. London: National Institute for Health and Care Excellence; 2012.
[120] National Institute for Health and Care Excellence. PH8 Physical Activity and the Environment. Recommendation 8. London: National Institute for Health and Care Excellence; 2008
[121] Department for Education *Standards for [secondary] School Premises*.May 2013.
[122] Department for Education, Education Funding Agency *Area Guidelines for Mainstream Schools Building Bulletin 103.* June 2014.
[123] National Institute for Health and Care Excellence. PH13 Promoting physical activity in the workplace. Recommendation 3. London: National Institute for Health and Care Excellence; 2008.
[124] National Institute for Health and Care Excellence. PH13 Promoting physical activity in the workplace. London: National Institute for Health and Care Excellence; 2008.
[125] National Institute for Health and Care Excellence. PH41 Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation. London: National Institute for Health and Care Excellence; 2012.
[126] National Institute for Health and Care Excellence. PH13 Promoting physical activity in the workplace. Recommendation 3. London: National Institute for Health and Care Excellence; 2008.
[127] http://dementiachallenge.dh.gov.uk/
[128] http://www.ukhealthforum.org.uk/who-we-are/our-work/policy/dementia/

[130] Department of Health, Public Health England, NHS Improving Quality, Local Government Association. NHS Health Check. http://www.healthcheck.nhs.uk/ (accessed 25 June 2014).
[131] Department of Health. Resources for commissioning Let's Get Moving interventions. https://www.gov.uk/government/publications/let-s-get-moving-revised-commissioning-guidance (accessed 01 July 2014).
[132] National Institute for Health and Care Excellence. PH17 Promoting physical activity for children and young people. National Institute for Health and Care Excellence, 2009.
[133] British Heart Foundation National Centre for Physical Activity. Physical activity guidelines for older adults. http://www.bhfactive.org.uk/olderadultsguidelines/index.html (accessed 27 June 2014).
[134] National Institute for Health and Care Excellence. PH16 Occupational therapy and physical activity interventions to promote the mental wellbeing of older people in primary care and residential care: This guidance was previously entitled 'Mental wellbeing and older people'. London: National Institute for Health and Care Excellence; 2008.
[135] National Institute for Health and Care Excellence. PH49 Behaviour change: individual approaches - guidance. London: National Institute for Health and Care Excellence; 2013.

[136] Erickson KI, Weinstein AM, Lopez OL. Physical activity, brain plasticity, and Alzheimer's disease. Archives of Medical Research2012; 43(8): 615-21.
[137] National Institute for Health and Care Excellence. PH44 Physical activity: brief advice for adults in primary care. London: National Institute for Health and Care Excellence; 2013.
[138] National Institute for Health and Care Excellence. PH17 Promoting physical activity for children and young people: guidance. London: National Institute for Health and Care Excellence; 2013.
[139] Local Government Association. Community pharmacy: Local government's new public health role. London: Local Government Association; 2013.
[140] National Institute for Health and Care Excellence. QS50 Mental wellbeing of older people in care homes. London: National Institute for Health and Care Excellence; 2013.
[141] National Institute for Health and Care Excellence. CG43 Obesity: guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. London: National Institute for Health and Care Excellence; 2013
[142] Developing a specification for lifestyle weight management services *Best practice guidance for tier 2 services. Department of Health. March 2013*
www.gov.uk/government/uploads/system/uploads/attachment_data/file/142723/Weight_Management_Service_Spec_FINAL_with_IRB.pdf

[143] PHE has commissioned the RCGP to produce an e-learning module to support primary care professionals discuss weight management which is due to launch in June 2014.
[144] National Institute for Health and Care Excellence. CG43 Obesity: guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. London: National Institute for Health and Care Excellence; 2013.
[145] PHE has commissioned BMJ Learning to develop an e-learning module on physical activity integration across the care pathway due for publication in June 2014
[146] Macmillan Cancer Support. Physical activity.
http://www.macmillan.org.uk/Aboutus/Healthandsocialcareprofessionals/Macmillansprogrammesandservices/Physicalactivity.aspx (accessed 26 June 2014).
[147] Stevenson, N. From illness to wellness: Achieving efficiencies and improving outcomes. London: NHS Confederation; 2011.
[148] Cawston P. Social prescribing in very deprived areas. The British Journal of General Practice 2011; 61(586): 350.
[149] PHE has commissioned BMJ Learning to develop an e-learning module on physical activity integration across the care pathway due for publication in June 2014
[150] National Institute for Health and Care Excellence. PH53 Managing overweight and obesity in adults lifestyle weight management services. London: National Institute for Health and Care Excellence; 2014.
[151] National Institute for Health and Care Excellence. Behaviour change: the principles for effective interventions. London: National Institute for Health and Care Excellence; 2007.
[152] Payne, K. Shared learning database: Making every contact count: implementing NICE behaviour change guidance.
http://www.nice.org.uk/usingguidance/sharedlearningimplementingniceguidance/examplesofimplementation/eximpresults.jsp?o=516 (accessed 25 June 2014).
[153] National Institute for Health and Care Excellence. PH13 Promoting physical activity in the workplace. London: National Institute for Health and Care Excellence; 2008
[154] National Institute for Health and Care Excellence. PH13 Promoting physical activity in the workplace. London: National Institute for Health and Care Excellence; 2008