

Healthy Planning

Professor Sir Malcolm Grant*

Introduction

Health care systems across the world are in crisis. Costs are continuing to rise. It is difficult to identify any nation where the current cost trend in providing healthcare is sustainable into the medium and long term. Health care is consuming an increasing proportion of most nations' GDP, and is, by common assent, too focused on the wrong parts of the life course. Healthcare is concentrated primarily on providing medical response to episodes of acute ill-health, and on managing chronic disease. And it does this, in the NHS as in most countries in the world, through a fragmented model of care. This historic design of healthcare systems has not adapted well to the changes in the burden of disease that have occurred in the 70 years following the foundation of the National Health Service in 1948.

It is no coincidence that a radical model of town and country planning was introduced in Britain at exactly the same time as the establishment of the National Health Service. In global terms, both of these systems remain significant outliers in their respective spheres. The comprehensive model of planning control in which development rights were nationalised, though subsequently stripped of the 100% development charge of the 1947 Act, remains the most dirigiste model in Western democracies. The NHS remains the most communitarian model of health provision at a population level. It was established to provide not only a universal model of healthcare, for an entire population, but to provide it free of charge at the point of clinical need. Both the funding and the provision of healthcare in Britain, unlike in most other nations, remain largely a state monopoly, and this is a fiercely ideologically protected zone.

This so-called Beveridge model, emerging from the groundbreaking wartime report on post-war social welfare,¹ pools the risk and the costs of ill-health across the entire population, funded through progressive taxation. It differs from the two other common models around the world (though most nations have a combination of approaches) which are the market model in which patients pay for their own care; and the Bismarck model, in which the role of the state is generally confined to prescribing and overseeing a competitive health insurance market, in which individuals accept direct responsibility for funding their own healthcare through an insurance policy, and in which risk is therefore pooled across a smaller community. Insurance models are universal only to the extent that individuals are able to obtain insurance cover, to the extent that their policy extends to all conditions and to the extent that people are not denied cover for pre-existing conditions. Most require some, often significant, co-payment by patients.

Partly because the NHS lacks the expensive overheads of insurance, but also for reasons of national fiscal austerity, the NHS has been able to hold the costs of healthcare in England to 9.7% of GDP (\$US4,177 per capita), by comparison with 11.54% of GDP (\$US4,782) in France, 11.14% (\$US5,463) in Germany, 12.25% (\$US7,867) in Switzerland and 17.07% (\$US9,869) in the USA,² and yet it remains highly ranked in global comparisons of performance.³

* The author was chair of NHS England from 2011–2018, but all views expressed in this paper are the author's own and are not to be attributed to NHS England. Thanks are due to the many colleagues at NHS England and beyond who have contributed to the development of the NHS Healthy New Towns programme over the past four years.

¹ *Social Insurance and Allied Services* (Cmd. 6404), November 1942 chaired by Lord Beveridge, which proposed radical reforms in order to address the "five giants on the road of reconstruction": "Want ... Disease, Ignorance, Squalor and Idleness".

² *Current health expenditure* World Bank; <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS>.

³ See e.g. Commonwealth Fund, *Health Care System Performance Rankings 2017* which ranks the UK No.1 of 11 systems in overall terms, especially in equity of access, though not in terms of healthcare outcomes; <https://www.commonwealthfund.org/chart/2017/health-care-system-performance-rankings>.

Health and planning

There were two main strands in the historical development of planning law. The first was the regulation of housing and slum clearance, in which the health of the population was the major policy driver. A major breakthrough came with the Public Health Act 1848, driven by Edwin Chadwick, which was the first occasion on which the British government took responsibility for the health of its citizens.⁴ It made provision for such issues as registration of common lodging houses, prohibition on the letting of basement rooms as dwellings, and requirements as to water supply, drainage, and the provision of water closets in new dwellings. While this started as a generally permissive approach, it was steadily tightened in its focus on health, nuisances and sanitation through the following years.⁵

The second historical strand, which came from the work of Ebenezer Howard and his *Garden Cities for Tomorrow*, which had led to the founding of two new private garden cities, was relatively little concerned with health, and much more with new models of urban settlement, and with relocating the working population from the congested Victorian slums of England's industrial cities.

In joining the two strands together, the post-war legislative era reflected a wider collective commitment to social welfare, evidenced also in physical terms through the New Towns Act 1946, and in social welfare terms in the National Assistance Act 1948. It was a comprehensive effort to bring to Britain a new era of social leadership and commitment.

The first 70 years

Just as the major challenges to the planning system in the late 1940s related to post-war reconstruction, the building of new and expanded towns, and a house building programme that has not been matched since; so also the major health challenges of the late 1940s related to communicable disease, injury, and incidents of acute ill health. In relation to communicable disease, significant progress had been made since the discoveries of the pioneering epidemiologist, John Snow, and his meticulous statistical work in tracking the relationship between the incidence of cholera in London and the source from which households were drawing their water supplies. He was able to establish that it was contaminated water, rather than foul air (disproving the "miasma" theory), which was the medium through which the disease was transmitted. The great sanitation reforms of the 19th century, including the drainage of London under the leadership of Chadwick the lawyer as chairman of the Metropolitan Board of Works, and Sir Joseph Bazalgette, its Chief Engineer, was the consequence of this discovery.

However, as important as those reforms were, communicable disease was by no means conquered. In fact, it has been estimated that during both world wars more military personnel died from infection, primarily sepsis, than from injuries sustained in battle. In addition, the Spanish influenza outbreak between March 1918 and March 1920, is estimated to have killed many more: between 50 and 100 million people, or between 2.5% and 5% of the global population:

"In terms of single events causing major loss of life, it surpassed the First World War (17 million dead), the Second World War (60 million dead) and possibly both put together. It was the greatest tidal wave of death since the Black Death, perhaps in the whole of human history."⁶

However, since 1948, science has played a major part in combating communicable disease. The discovery of penicillin and the array of other antibiotics that followed, have converted much infection from a life-threatening disorder into a manageable condition. Over 20,000 people in Britain died from tuberculosis

⁴ Chadwick was not an engineer, but a lawyer—a graduate of UCL, no less—and a close friend of Jeremy Bentham. He had researched and self-published in 1842 the *Report on The Sanitary Condition of the Labouring Population of Great Britain*, which had a dramatic impact on public and political opinion in relation to urban conditions.

⁵ For a brief history see Grant, Malcolm, *Urban Planning Law* (Sweet and Maxwell, 1982) p.9.

⁶ Spinney, Laura, *Pale Rider: the Spanish Flu of 1918 and how it changed the world*, Jonathan Cape 2017, p.4.

in 1948; just 196 people did so in 2016.⁷ Although there are many parts of the world where communicable disease continues to be life-threatening (and for the entire world one of our biggest health threats is now the development of antimicrobial resistance), the modern burden of ill-health is now mainly through noncommunicable disease (“NCD”).

This expression captures a range of conditions. According to the World Health Organisation,⁸ cardiovascular diseases account for most NCD deaths, or 17.9 million people annually, followed by cancers (9.0 million), respiratory diseases (3.9 million), and diabetes (1.6 million). These four groups of diseases account for over 80% of all premature NCD deaths. Tobacco use, drug addiction, physical inactivity, the harmful use of alcohol, and unhealthy diets all increase the risk of dying from a NCD. One of the consequences is a steady rise in the proportion of the population that is overweight or obese.

Obesity

Let’s start with obesity. According to a study by McKinsey Global Institute⁹ (“MGI”), more than 2.1 billion people—close to 30% of the global population—today are overweight or obese. That’s much more than twice as many of the people in the world—adults and children—who are undernourished. If the growth rate in the prevalence of obesity continues on its current trajectory, almost half of the world’s adult population is projected to be overweight or obese by 2030.

MGI comment that:

“This has huge personal, social, and economic costs. Obesity is responsible for around 5 percent of all global deaths. The global economic impact from obesity is roughly \$2.0 trillion, or 2.8 percent of global GDP, roughly equivalent to the global impact from smoking or armed violence, war, and terrorism.

The toll of obesity on health-care systems alone is between 2 and 7 percent of all health-care spending in developed economies. That does not include the large cost of treating associated diseases, which takes the health-care cost toll up to 20 percent by some estimates.”

MGI advanced a range of initiatives that would need to be taken together in a comprehensive approach to reversing the curve, observing also that “the United Kingdom invests less than \$1 billion a year in prevention activities such as weight-management programs and public health campaigns. To put that in perspective, that is only about 1 percent of the social cost of obesity in the United Kingdom”.

In the UK, a 2007 report from the Government Office for Science Foresight team¹⁰ had forecast that by 2025, 40% of the population would be obese, and by 2050 over half the UK adult population could be obese, and with significant economic and social cost. Policy response has been weak, but a 2017 update by one of the report’s authors reported that the rate of increase in obesity had subsequently slowed and for primary school aged children seemed to have plateaued.¹¹ Nonetheless, the UK ranks amongst the worst in Europe, and in 2016/2017 617,000 admissions to NHS hospitals recorded obesity as a primary or secondary diagnosis.¹² Childhood obesity is today a national scandal and a health time bomb, with a marked socio-economic correlation.

Obesity and poor diet are linked with type 2 diabetes, high blood pressure, high cholesterol and increased risk of respiratory, musculoskeletal and liver diseases. Obese people are also at increased risk of certain

⁷ Dayan, Mark. *Death through the decades*. Nuffield Trust 2018: <https://www.nuffieldtrust.org.uk/news-item/death-through-the-decades>.

⁸ <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>.

⁹ MGI, *Overcoming Obesity: an initial economic analysis*, 2014.

¹⁰ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/287937/07-1184x-tackling-obesities-future-choices-report.pdf.

¹¹ See <https://foresightprojects.blog.gov.uk/2017/10/04/dusting-off-foresights-obesity-report/>.

¹² NHS Long term plan, 2019, 2.13; <https://www.longtermplan.nhs.uk/online-version/chapter-2-more-nhs-action-on-prevention-and-health-inequalities/obesity/>.

cancers, including being three times more likely to develop colon cancer. Likewise, cardiovascular diseases. Medical advances mean that people are more likely to survive a heart attack today, yet heart disease is still the biggest killer worldwide: as a distinguished American cardiologist observed recently, “we do everything in our modern lifestyle to hurt the heart”.¹³

Causes and incidence of non-communicable disease

However, the factors that are contributing to this rise of non-communicable disease are numerous and hugely complex. Looking at the health of the population as a whole, it is generally agreed that the contribution made by the formal systems of healthcare may be as little as 15%. The two key remaining factors are genetics and environment/lifestyle. It is difficult to ascribe a percentage value to each respectively, not least because of the significant interaction that occurs between them and the still-disputed nature-nurture debate,¹⁴ but it is a reasonable assumption that environmental and lifestyle factors account for at least 40% of the burden of ill-health in the population.

Moreover, the burden of disease falls unequally across the population. Due to factors such as the ability to treat most communicable disease, combined with better nutrition and economic opportunity, life expectancy for the population overall has risen by 10 years over the past 70 years. However, it has not been matched by increases in healthy life expectancy. Here, the inequalities as demonstrated in Figure 1 are obvious: life expectancy amongst the most deprived decile of the population is significantly lower than for the least deprived decile; but the difference in *healthy* life expectancy is even more marked. People living in the least deprived areas live around 20 years longer in good health than those in the most deprived areas.

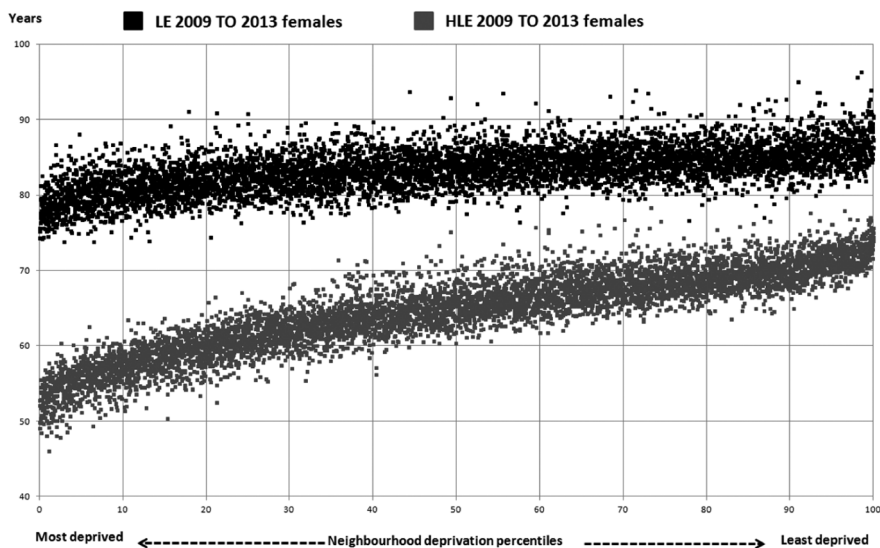


Figure 1: life expectancy and healthy life expectancy Source: ONS

These effects are amplified by demographic changes including that of a steadily ageing population as illustrated in Figure 2, given that healthcare costs rise sharply with age and in the last years of life. An

¹³ Herbert Warraich, Harvard cardiologist, *Guardian*, 4 August 2019.

¹⁴ For a recent contribution to the debate see *Plomin, Robert*, *Blueprint: how DNA makes us who we are*, Allen Lane, 2018.

estimated 6 million people aged 60 and over now live with two or more long-term conditions, and long-term conditions represent 70% of hospital bed days and 50% of all GP appointments.

Figure 2: demographic change, 2010-2035

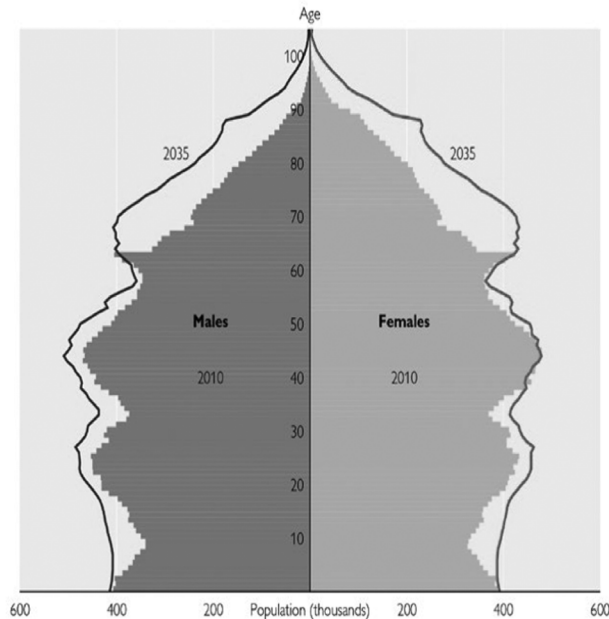


Figure 2: demographic change, 2010-2035 Source: ONS

The future contribution of science

It is a legitimate question to ask how far these problems are capable of being solved by new technologies. This is an exciting time in which we are seeing significant breakthroughs in our understanding of human biology, in medical discovery, in pharmaceuticals moving into novel cell and gene therapies and in new medical technologies. Much of this is enabled by advances in data science. New medical technologies generate vast amounts of data, and their effective deployment is starting to drive a data revolution in health.

For example, genomics, involving the sequencing of the genome, is now moving into mainstream NHS clinical practice in England—the global leader in this field—enabling advances in our understanding of the role of genomic variants in rare diseases and cancers. Sequencing generates huge amounts of data from the six billion base pairs in each human diploid genome, and equally vast computing capacity to analyse the data. It offers insights into the role of human genetics in disease that could not conceivably be generated without advanced analytic capability. It also raises the prospect of much earlier diagnosis of cancers from the presence of circulating tumour DNA in blood. Earlier detection and earlier diagnosis leading to earlier intervention will assist in relegating many instances of cancer to the category of treatable long-term conditions.

Already, artificial intelligence including machine learning and deep learning is starting to transform clinicians' ability to predict, diagnose and treat disease. Machines are learning how to read diagnostic

images at a quality level equal to that of experienced clinicians, but also at a fraction of the cost and time of human input. Scientific advance across many clinical areas is proceeding at such pace that we can anticipate significant breakthroughs in our treatment of the major killer diseases, including cardiovascular disease and cancer. Though not yet dementias.

However, there are two caveats to this. The first is that all new discovery and technology comes at a price. Increases in the costs of drugs and equipment continue to drive inflation in healthcare budgets across the world, even though every system of healthcare has machinery—whether explicit or implicit—that suppresses demand and rations access to expensive drugs and technologies.

The second caveat is that there has been little impact on the development of strategy to promote prevention of ill-health in the first place. So, although scientific advance is likely to continue to relieve some of the distress of disease and to drive a more personalised model of treatment, advances in the prevention of ill-health will most likely need to continue to rely upon government interventions.

Those interventions that have worked well historically have tended to be undertaken by governments on a national scale using regulatory techniques with clear objectives. For some, particularly around accidental death and injury and carrying criminal liability—such as health and safety at work and the compulsory use of seatbelts in cars—the impact started to be felt relatively quickly; but many others have taken decades to have any significant impact and still fall some way short of where we need to be. Obvious examples have been measures to improve air quality and water quality, the fluoridation of water and anti-smoking campaigns. In consequence of a sustained campaign over 40 years, the proportion of adult smokers in the population in England has fallen from over 60% to around 17% today. It is a dramatic change, yet smoking remains the leading avoidable cause of ill-health and early death.

Hence the need to understand better the extent to which existing instruments such as the planning and healthcare systems can work together on the common goal of reducing the incidence of ill-health across the population.

Towards better integration of healthcare

The response of the NHS in England to the modern world of disease and its treatment, has been to start to move towards closer integration of health and social care services, trying to overcome the silos that exist between primary care, secondary care and tertiary/specialist care; along with those between healthcare and social care; and those between the treatment of physical ill-health and mental ill-health. This is not a trivial exercise. In England we spend around £140 billion a year on healthcare, and another £40 billion on social care, much of which is devoted to the needs of a frail elderly population.

The NHS in England is a fragmented eco-system, rather than a simple corporate structure. It is currently involved in the most radical large-scale move to integrated care of any health system in the world. It is experimenting with moving from a hospital-based model which currently consumes the largest part of the NHS budget, where the financial incentives favour the treatment of patients rather than the prevention of ill health, to a place-based model. In this, funding becomes channelled more towards measures improving the quality of the health of the population, rather than the financial sustainability of the institutions providing healthcare. The objective—easy to describe but incredibly difficult to achieve—is to push more resource into the prevention of ill-health and its treatment—so far as possible, out of hospital—at an earlier stage. A major experiment has been occurring in Greater Manchester, with the joining up of 10 of the unitary authorities in the conurbation along with GPs and hospital health providers, to focus on the optimal investment of the “Manchester pound” i.e., the deployment of a devolved budget in excess of £6 billion across the whole of Greater Manchester in pursuit of improvements in population health.¹⁵

¹⁵ The Greater Manchester Health and Social Care Partnership works across the region addressing not only major killer conditions but also the wider determinants of health: see <http://www.gmhsc.org.uk/about-devolution/>.

Across the rest of England, the NHS has facilitated the setting up of a series of Sustainability and Transformation Partnerships, bringing together an array of NHS and local authority decision-makers, and these are now steadily maturing into a national network of Integrated Care Systems focused upon population health and providing a simplified governing structure, unified budgets and an integrated model of health and social care attuned to local health needs.

As the NHS moves to closer integration of its own services, and to a renewed focus on prevention and health, so it is compelled to work more closely with the agencies with broader social responsibility, including local government and the planning system.

For this reason, in the *Five Year Forward View*, published in 2015 by NHS England, we set out proposals not only for the better integration of healthcare as mentioned above, but also for the promotion of healthy new settlements. This has been carried forward by two further strategy statements: the review of the *Five Year Forward View* published in 2017, and the recently published *Long Term Plan for the NHS* (February 2019).¹⁶ Since 2016 we have been working on a program to understand how health can be better integrated into the design of new settlements.

Driving health priorities in the design of new settlements

We need to start with some caveats. This is not straightforward territory, for at least five main reasons.

The first is that the environment is but one of many variables that have an impact on human health, and that there are many more aspects to it than those which are regulated under planning: for example, clean air and clean water. Poor urban air quality, particularly in consequence of traffic movements, has a demonstrably significant detrimental impact on human health.¹⁷

Second, although planning and health have been linked almost since birth, they have led very different lives. The health of the population may have always been a material consideration in planning, but it has been more of a wallpaper feature than a primary focus.¹⁸

Third, new settlements represent a tiny proportion of new housing stock. Nonetheless, they provide the principal opportunity for embedding health-promoting innovation at the earliest design stage, which is a vital part of addressing the wider role of urban settlements in promoting population health.¹⁹

Fourth, there are obvious limits to architectural determinism. As history reveals, people can lead the most unhealthy lives in the most wonderful environments. Human behaviour is not necessarily determined by physical settings. However, conversely, it can be exceptionally difficult to lead a healthy life in an unhealthy environment.

Fifth, health inequalities in England are stark, and are not reducing. Healthy new settlements will appeal to homeowners, especially those with families, but offer no solution to people living in our most deprived communities.

However, notwithstanding these five reservations, in general, where and how people live has a significant impact on their mental and physical health, and the planning system as a powerful regulatory model has a potentially significant contribution to make to the health of the population.

¹⁶ <https://www.longtermplan.nhs.uk>.

¹⁷ See further *Smart Streets: Report of the Commission on London's Roads and Streets*. Chaired by Sir Malcolm Grant. Centre for London 2017: <https://www.centreforlondon.org/publication/street-smarts-report-of-commission-londons-roads-and-streets/>.

¹⁸ Health is a theme that runs through National Planning Guidance (<https://www.gov.uk/guidance/health-and-wellbeing#achieving-healthy-and-inclusive-communities>) and also the current edition of the *National Planning Policy Framework* (June 2019), where it is highlighted in chapter 8, *Promoting healthy and safe communities*, as an objective of planning policies and decisions. There is an emphasis on enabling and supporting healthy lifestyles, especially that where this would address identified local health and well-being needs. The NPPF also advocates planning positively for the provision of shared spaces and community facilities, taking into account the delivery of local strategies to improve health, social and cultural well-being for all sections of the community, and guarding against the unnecessary loss of valued facilities and services. These are all long-term concerns for the planning system, but the guidance still falls far short of driving health improvement as a central consideration in planning for new settlements.

¹⁹ As to which see the King's Fund publication, *The role of cities in improving population health: international insights* (2018) <https://www.kingsfund.org.uk/publications/cities-population-health>.

Today, compared to 70 years ago, the disease burden is increasingly associated with lifestyle. In our cities, towns and villages cars are either essential or more convenient for travelling between home and school or work, and to shops, services and entertainment, contributing to sedentary lifestyles and air pollution.²⁰ Low-density living and a lack of good community facilities are associated with increased social isolation²¹ and a lack of appealing green space reduces levels of physical activity and mental wellbeing; childhood obesity is clearly associated with accessibility of fast-food outlets²² and the densities of physical activity facilities are associated with lower levels of adult obesity.²³

In short, town planning, transport planning and house building have inadvertently contributed to the lifestyle associated diseases that place an unacceptable burden on both individuals and the NHS. Many of our modern High Streets are dominated by fast food takeaways; driving is often the only or at least the most convenient way to get around; and we have a legacy of poorly maintained parks and green spaces which do little to invite walking or play.

An evidence review published in 2017²⁴ by Public Health England concluded that:

- Neighbourhood design (such as the layout and connectivity of streets) influences levels of physical activity among local residents.
- Housing quality affects health in various ways, for example, living in cold or damp housing increases rates of respiratory conditions and affects other health outcomes.
- The availability of affordable, healthy food in the local area is an important determinant of dietary behaviours, obesity rates and other outcomes.
- Access to nature, parks and green spaces is associated with improved mental health and reduced risk of cardiovascular disease.
- Provision of good public transport combined with infrastructure to support walking and cycling can lead to a number of health gains.
- Living in areas with poor air quality is associated with increased risk of developing various health conditions, including chronic respiratory conditions and cancer.

Many of our neighbourhoods, towns and cities have a restrictive impact on people's choices and chances to lead healthier and more active lives. The evidence adds up. UK schoolchildren are amongst the least active in the world and amongst the most overweight or obese: one in three children in year six is in that category, and it is estimated that 36,815 deaths per year across the whole population could be avoided through increased physical activity.

What can healthy planning achieve?

The Healthy New Towns program, established by NHS England in 2016, set out to review how health and well-being could be planned and designed into new places. We wanted to build partnership with housebuilding, healthcare, local communities and local government to demonstrate how to create places that offered better choices and chances for a healthier life.

Our three priorities were:

- planning and designing a healthy built environment;
- creating innovative models of health care;

²⁰ Public Health England (2017). *Spatial planning for health: an evidence resource for planning and designing healthier places*.

²¹ Mental Health Foundation (2016) *Fundamental Facts about Mental Health*.

²² Hamano, et al (2017) Association between childhood obesity and neighbourhood accessibility to fast food outlets: A Nationwide 6-Year follow-up study. *Obesity Facts* 2017; 10:559–568.

²³ Mason, et al, (2017) Associations between fast food and physical activity environments and adiposity in mid-life: cross-sectional, observational evidence from UK Biobank. *The Lancet* Volume 3, No.1.

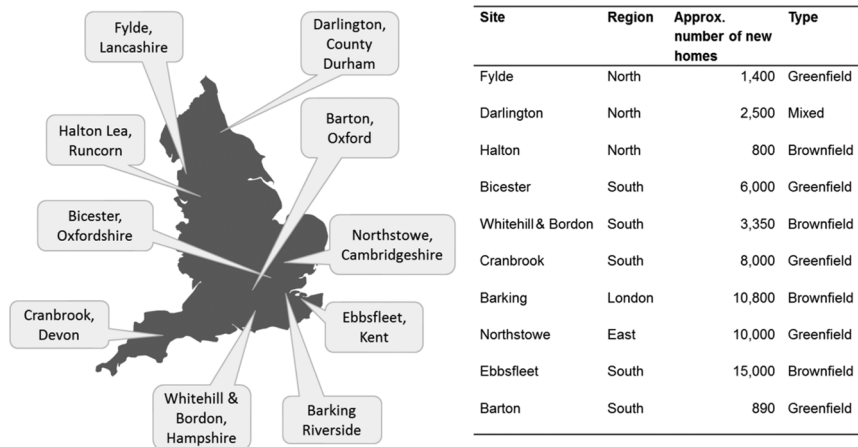
²⁴ *Spatial Planning for Health. An evidence resource for planning and designing healthier places*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729727/spatial_planning_for_health.pdf.

- encouraging strong and connected communities.

We invited promoters of new large-scale housing developments to participate in the program, and from over 100 applications we selected 10 demonstrator sites, through a process of presentation and competitive challenge. The choice was made on the innovativeness of the submissions that we received, and also so as to secure a range of locations and different challenges across England.

There are three particularly large developments amongst the 10 demonstrator sites: Barking Riverside, London, with 10,800 homes being built on brownfield land alongside the River Thames; Ebbsfleet Garden City, Kent, which has up to 15,000 homes being built, again on brownfield sites, by 2026; and Bicester, Oxfordshire, with 13,000 homes being built over 20 years. Some are on formerly government owned land, including the release of Ministry of Defence land for the project at Whitehill and Bordon, Hampshire (3,350 homes); and Northstowe, Cambridgeshire (10,000 homes on the former RAF Elkington base).

Each of the demonstrator sites has established different approaches to promoting healthy living in the new settlement, in some cases embracing significant open space (Whitehill and Bordon is managing 54ha of wood and heathland); and in other cases, deploying modern technologies.



Source: NHS England

Figure 3: demonstrator sites Source: NHS England

Putting health into place

Working in partnership with the demonstrator sites, together with the Town and Country Planning Association, Public Health England, the RTPI, the King’s Fund, the Young Foundation and MHCLG, we were able to identify 10 principles as a route to healthy places. There is evidence of their application in all of the demonstrator sites.

The principles are defined and explained in three publications by NHS England in September 2019.²⁵

²⁵ *Putting Health into Place*, 1: *Plan, Assess and Involve*; 2: *Design, Deliver and Manage*; 3: *Develop and Provide Healthcare Services* NHSE 2019. Accessible at <https://www.england.nhs.uk/ourwork/innovation/healthy-new-towns/>.

1. **Plan ahead collectively:**

This principle stresses the importance of partnerships, particularly with local government, with health commissioners and providers, with developers and housing associations with community led organisations and residents; and with businesses. In the case of Bicester, for example, the local authority's role has been pivotal to success, in extending the healthy new town principles way beyond the development site itself, and into their management of the town.²⁶

2. **Plan integrated health services that meet local needs:**

This requires an understanding of specific local health needs and how they will evolve as the population changes, informed by robust forecasting and modelling. It extends not only to healthcare but also to social care and needs to be developed in a joined-up way.

3. **Connect, involve and empower people and communities:**

We know that loneliness increases the likelihood of death by 26% and that people with strong relationships are 50% more likely to survive life-threatening illnesses. So social connections are critically important and can be promoted by planning principles designed to that end. In Bicester, a "healthy best" Facebook page has been created, reaching around 13,000 people per month.

4. **Create compact neighbourhoods:**

Central to this principle is walkability and access that is not reliant upon motor vehicle. It includes the creation of pedestrian and cycle-friendly streets that will enable people of all ages, abilities and financial means to reach jobs, services, shops and schools easily. Commitment to creating compact neighbourhoods is a vital consideration at the earliest stages of planning and development.

5. **Maximising active travel:**

The idea here is that a well-planned neighbourhood should make walking, cycling and affordable public transport the first choice for getting around for everyone.

6. **Inspire and enable healthy eating:**

Careful place making has a role here, in giving residents easy access to nutritious ingredients for home cooking and a healthy food more generally. It also involves restricting access to less healthy foods, from fast food takeaways for example. The London Borough of Barking and Dagenham was the first local authority in England to ban licences for hot food takeaways within a 400m radius of primary and secondary schools.

7. **Fostering health in homes and buildings:**

Developing a Quality Mark to raise the standard of new homes, including criteria on natural light and ventilation, space and accessibility, as well as streets, neighbourhood design and landscape.

²⁶ For further details of the Bicester demonstrator, see Rowe, Rosie, "Bicester as a living lab", in *Creating healthy places. Perspectives from NHS England's Healthy New Towns programme*. London. The King's Fund. September 2019, p.29.

8. **Enable healthy play and leisure:**

There is an interesting example in Whitehill and Bordon of a dementia friendly family park, with clear and legible signage in the play area for young people. The intention is to draw together a strong community through leisure activity.

9. **Provide health services that will help people stay well:**

The objective here is to ensure that the built environment enables people to prevent or avoid avoidable illness. For example, those with long-term conditions such as type II diabetes heart disease, can be supported to manage their own health and well-being. The design of new settlements can anticipate the development of integrated care systems that will bring together a range of health professionals.

10. **Creating integrated health centres:**

This envisages the establishment of a range of health services on a single site, allowing physical joining up of connections between GPs, acute physical health care facilities and mental health services. This reflects the NHS strategy towards integration and defragmentation of services. A modern health and well-being campus could offer GP services, diagnostic testing, pharmacy, outpatient mental and physical health services together with leisure facilities and a base for community organisations. One aspect of this can involve the re-purposing of existing NHS land and buildings to ensure that they are put to the best possible use.

As one major national developer has put it,²⁷ rather than the usual “opt in” health benefits, such as gyms, they want to create open environments designed for well-being that will benefit 100% of the people who spend time in them. This will include reintroducing the notion of the facilitated sport or social activities that people experienced when at school. Across the new town centre, they plan to program events and activities for everyone who chooses to participate. They are particularly interested in enabling events that allow for intergenerational relationships to be formed: with an ageing population and a New Town centre that will evolve over 10–15 years, they need to plan to the needs of a changing demographic.

They also accept that their involvement will continue well after the buildings are completed and after the homes, shops and offices have been let or sold. They perceive themselves as a long-term investor motivated by creating value through stable income streams. Since the success of their places depends on the quality of the environment they create, they are willing to take an active role in the management and curation of both the buildings and the open spaces over the long term. They are also developing a social charter, in partnership with the local council, to monitor the impact of their investment on the existing community and ensure a lasting legacy. They will feed insights back into the NHS Healthy New Towns program, working with health agencies and other government departments to influence further policy development. They recognise that, as developers, they have long focused on the aesthetics of design, but for the future it will be their role in managing and making places that will be more important.

Next steps

Our 10 demonstrator sites will have an impact for ultimately some 70,000 households, but they are simply demonstrators of what can be achieved in a national roll-out in which healthy planning becomes a fundamental of all new development, and also in interventions in existing settlements. All of this needs

²⁷ Cariaga, Emma, “The role of developers in creating healthy places”, in *Creating healthy places. Perspectives from NHS England’s Healthy New Towns programme*. London. The King’s Fund. September 2019, pp.54–55.

to go much further than a simple process of “health wash” and to become a fundamental ambition for all new settlements. The NHS long term plan, published earlier this year, commits to further development of the initiative.

From the demonstrator initiative, NHS England also set up a Healthy New Towns Network of developers and housing associations to advise on the future guidance to be issued by the NHS, to commit themselves to adopting the 10 principles so as to make a material difference for their developments; and to work in partnership with each other. Network partners have been clear that what they want from the programme is:

- Learning from and sharing data, evaluation, research, case studies and learning.
- Opportunities to work with NHS Trusts.
- Sharing ideas, vision and success with larger scale developers.
- Trialling and implementing Healthy New Town principles in their developments.
- Development of guidance for planners on the application of placemaking design principles.
- Joint research and evaluation programmes e.g. into Smart Home technology.

Another outcome has been the development of a Healthy New Town Standard, including a Healthy Homes Quality Mark, which will be awarded to places that meet the high standards and principles that promote health and well-being. It is anticipated that these will be embedded within local planning guidance to ensure that all future developments have a focus on design that supports prevention and well-being. Embedding these principles within local planning guidance is necessary to ensure all future developments have a sharp focus on design that supports prevention and wellbeing.

A critical component of the approach is to ensure that there is a market premium for homes in new settlements that meet the Healthy Homes Quality Mark. Early discussions with developers involved in the demonstration sites suggest that this is indeed already proving to be the case.

Conclusions

The funding crises that healthcare systems face across the globe require innovative approaches in order to reduce the burden of ill-health and to tackle the problems of health inequality. Scientific advance will continue to advance rapidly the accuracy and personalisation of medical interventions, but no technology currently under advanced development looks likely to make any significant contribution to reduction in the incidence of non-communicable disease across a whole population.

This will require significant changes in the models of healthcare delivery, complex though that is in an environment that is innately risk averse and conservative, and where the highest professional priority must always be in relieving disease and distress, but much of the illness and distress engendered by noncommunicable disease in modern society is actually avoidable. There are many things that governments can do to improve the quality of population health, though it is never uncontroversial. There is a tension between government intervention and personal choice, which has seen, even today, disputes about the acceptability of imposing a sugar tax on fizzy drinks, or minimum alcohol unit pricing. There is an argument that people are entitled to live unhealthy lives if that is what they wish, but too often there is no choice: the gap demonstrated in figure 1 between life expectancy and healthy life expectancy shows that the correlation is less with personal choice than with lack of opportunity. Moreover, individual ill-health has much wider societal impact and financial cost, including the treatment and care costs of the millions of citizens of the UK who have, or are in the process of developing, type II diabetes in consequence of poor dietary habits and lack of exercise.

The planning system is not the answer to all of these challenges. And it would be naïve to assert that there is a model of architectural determinism that can ensure that people live healthier lives. And yet we have it within our power to reverse some of the mistakes of previous planning eras, to break down

dependence upon the motorcar and the fast food shop, to enhance community strengthening and the ability of citizens of all ages to live together in a mutually supportive way, and to provide decent and healthy housing for the population.

There is a powerful combination emerging here. Building upon the radical foundations of 1948, both the NHS and planning system are coming together around the notion of place—of a place-based rather than institution-based model of funding and providing healthcare, engaging with local government and other public and private agencies to tackle inequalities and the causes of ill-health; and a reinvented health-based approach to planning, especially in the design, development and curation of new settlements.

The Healthy New Towns programme is the first time in my knowledge that the NHS has engaged with the urban development process and has attempted to shift thinking and practice in a way which brings health benefit to populations whilst at the same time enabling reform by the NHS of its own institutions for meeting healthcare needs of a modern population. It is long overdue. There will never be a workable approach for addressing complex social problems such as population health without the close alignment that this process has started to develop, between all the institutions and instruments that have the capability to effect change.