Public Health and Pharmaceutical Policy: 2018 Issues

The affordability of universal health care and the sustainability of continuing pharmaceutical/biomedical innovation and production in the UK post-Brexit.

David Taylor, January 2018

The views expressed in these notes are those of the author. References available on request to David.G.Taylor@ucl.ac.uk

Key Messages

The creation of the NHS in 1948 was one of the most significant modernising events in UK history. It was intended to provide the entire British people with the best affordable health care, not merely a highly cost effective service. The goal was to help create a fair, unified and healthy society with productive citizens and industries, able to prosper in a more competitive, post Imperial, world.

Britain can still afford to be a world leader in high quality universal health and social care provision, including services ranging from disease prevention to supplying ‘cutting edge’ treatments for illnesses like cancers. In proportional terms the UK currently spends some 10-20 per cent less of its GDP on health and health related social care than countries like France and Germany, and the actual amount of NHS resources spent on pharmaceuticals has stayed at around 10 per cent for several decades. New medicine costs are not making a publicly funded health service unaffordable.

Many people who voted for Brexit want a fairer society and a well-funded NHS. Yet there is a danger that without appropriate leaving arrangements the country will be poorer for a prolonged period. Regarding the life sciences sector, which is important for the economy, regulatory arrangements like those for medicines licensing will need to remain in line with those of the EU if long term financial damage is to be minimised. Appropriately qualified individuals from Europe are also required by the NHS and British industry.

Since its creation in 2013 NHS England has faced many challenges associated with growing demands and a limited budget. It is understandable that it should seek to cut medicines costs. NHS England is increasingly able to act as a single (monopsonistic) national purchaser of medicines and to override NICE judgements on NHS patient treatment entitlements. However, the UK public has interests in supporting a viable pharmaceutical sector as well as an affordable NHS. In a well governed system there should be controls in place to stop market abuses of all types, and protect overall community aims.

UK life expectancy rose by approaching 15 years between the 1940s and 2017. Yet despite the NHS significant health inequalities remain. People in the most disadvantaged localities have healthy life expectancies up to 20 years shorter than those in the wealthiest, and in some older groups life expectancy has recently declined.

Health professionals can contribute to improving health by optimising the use of drug and other therapies for both preventing and curing diseases. They can also help people adopt healthier behaviours. In future it will not be sufficient for practitioners such as doctors and pharmacists just to know about diseases and the drugs and other interventions that can treat them. They will increasingly need understanding of the people who live with ill health and the social systems and forces that shape health behaviours and determine the opportunities and levels of care and support available to individuals, families and communities.
The establishment of the NHS in June 1948 was arguably the most important modernising event in twentieth century British history. Against the background of the impacts of the second World War (WW2) and the anticipated ending of the British Empire (India became independent in the summer of 1947, less than a year after the NHS Act received Royal assent) the decision to create a universal health care system capable of ensuring that the British population would be one of the healthiest—and by implication most productive—in the world required both courage and foresight.

The core political goal was not merely to create an adequate, relatively low cost, service. Rather it was—in the light of the electorate’s war time experiences and post-war priorities—to provide the best affordable care based on values of national solidarity and a widespread moral belief that people with health problems should not be left to face them on their own, at the mercy of profiteers. There is evidence that policy makers also intended that the further development of research based biomedical/life sciences industry would, along with other forms of technically advanced enterprise, enable the UK to earn its living in the post Imperial world in ways that would allow the country to become wealthier as well as healthier.

Seventy years later the NHS is providing relatively good if not always satisfactory health care for the UK population and most of the individuals within it. The current ‘winter crisis’ is indicative of significant resource pressures, and the clarity of the nation’s vision about what the NHS is seeking to achieve and the values that drive it may have weakened over the decades. However, an increased plurality of needs and expectations, coupled with the ongoing effects of demographic and epidemiological transition and the revolutions in medical and pharmaceutical technology that have taken place since the introduction into widespread use of drugs like penicillin G and penicillin V, mean that the task of providing good health and related social care is now inherently more complex and costly than it was when the health service first came into being.

The available data indicate that, taking into account definitional difficulties, the UK currently spends around 1-2 per cent less of its national income/GDP on health and health-related social care than countries like France, Germany and other leading European States (see below). There are also concerns about issues ranging from the adequacy of public health improvement programme funding and the affordability of new medicines and other pioneering biomedical technologies. Recently reported life expectancy declines amongst some older age groups and continuing health inequalities between more and less advantaged social groups provide reason for believing that health policy issues require careful attention, and should not be obscured by what may be seen as more urgent challenges such those associated with Brexit.

Against this background these notes offer a brief analysis of:

- public health trends in the UK and globally, with special reference to the causes of health inequalities and the ways in which they might desirably be reduced;
- the present and future affordability of the NHS and the impacts of factors such as population ageing (which the available economic evidence shows has not to date been a dominant cause of overall health system cost increases) and the development of technologies such as more effective anti-cancer treatments and gene therapies for a growing range of conditions; and
the life science sector related regulatory, economic and wider policy challenges that Britain will face in the coming decade. The precise nature of these will to a degree depend on the outcomes of the current negotiations about the UK’s departure from EU membership, but they will be significant whatever the specifics of the agreements finally made.

The establishment of the NHS was not an achievement of the 1945-51 Labour administration alone. Individuals such as Bevan of course made important contributions in areas such as overcoming medical resistance to the creation of a publicly funded health service. It was also a Labour policy decision to resource the NHS via pooled taxation rather than the ‘compulsory national insurance for all classes and for all purposes from the cradle to the grave’ favoured by Churchill in 1943. Yet the formation of a universal health care system had been advocated by a range of politicians during interwar period, following the experiences of WW1 and the example set by the USSR in and after the 1920s. During WW2 members all parties involved in the then coalition government backed the formation of a national health service – see, for instance, the Conservative Henry Willink’s 1944 statement at https://www.youtube.com/watch?v=Tz0w-ilhji4

Failures to understand the strength of the community-wide consensus about the need for the NHS can sometimes distort debate about British society. This might in some circumstances weaken welfare provisions by leading decision makers to under-estimate the strength of community wide support for universally accessible services that are not charged for at the point of use. With regard to health care funding it may also on occasions reinforce fears that resourcing via taxation is seen as a politically ‘expensive’ option, in as much as higher taxes will equate with lost votes.

‘Re-badging’ NHS contributions as insurance payments (ie the ‘hypothecation option’) or even representing them as discretionary personal outlays is therefore attractive to some observers. Yet the extent to which such changes would in practice enhance health care funding is questionable, and health equity would probably be undermined by the further use of mechanisms such as increased user charges. If funding sufficient to make the NHS and related social services world-class is to be assured there is arguably no substitute for well-informed political and public will to achieve good care standards, coupled with a robust national economic performance.

It is in addition worth emphasising that although the 1948 NHS represented a major step away from the ‘Poor Law’ mentality of the Victorian era by making ‘medical’ services free to all at the point of use, this was not true of social care. Recipients of the latter, which when defined appropriately is a vital part of good quality health care, were and still are charged up until the point at which they are regarded as too poor to pay more.

As patterns of need have changed (with falling rates of infection and early life terminal illness balanced by an increase in the relative numbers of older people with support requirements) this has on occasions fostered distortions in the definitions of health as opposed to social care, and an undesirable bias against the provision of public funding for the latter. This may to a degree be attributed to the failures of the original architects of the NHS and subsequent decision makers to fully understand health related needs, coupled with factors such as social class/social positioning linked inequities.
It can be argued that inappropriate forms medical and, more recently, managerial dominance within
the NHS and the wider care system have in part derived from Britain’s heritage of class related
assumptions and prejudices. So too may have difficulties in areas such as adequately developing
community nursing services since the first major NHS reorganisation in 1974 or permitting
community pharmacists a greater independent role in diagnosing and treating common illnesses
and/or providing medicines like anti-hypertensives and statins for the primary prevention of disease.

Public health trends

In 1900 infant mortality (defined as the number of deaths occurring in the first year of life) was
about 150 per 1000 in the UK and in the order of 300 per 1000 in many less advantaged parts of the
world, including Britain’s then colonies. Today, the infant mortality rate in Britain stands at about 4
per 1000, and the overall global average is between 15 and 20 per 1000. Even in sub-Saharan Africa
infant mortality is now down to a regional average of little more than 50 per 1000. This is about a
third of that recorded in late Victorian England at the zenith of its world-wide power.

Within countries and regions infant mortality amongst the most and least advantaged social groups
varies significantly. Today, the ratios between the highest and lowest observed rates are typically
greater than those reported in 1900. Hence inequalities in infant mortality persist and in relative
terms have in many instances increased. Yet in absolute terms infant mortality has fallen
dramatically, nationally and internationally. The conclusion to emphasise in such contexts is that
fundamental progress has been achieved and is continuing, even though much more still needs to be
done in terms of delivering the best possible health for all.

Statistics for many other aspects of public health, from tobacco smoking rates through to maternal
mortality and life expectancy at birth and at age 65, tell similar stories. In the case of smoking, for
example, overall UK rates now stand at less than a third of those recorded in the late 1940s. In total
under 17 per cent of British adults now smoke tobacco, compared with 60 per cent or more when
the NHS was first established.

Smoking is still declining, in part because of people’s access to alternatives such as vaping. Yet the
ratio between tobacco smoking rates in the least advantaged and most advantaged social groups has
risen markedly in recent decades. In some vulnerable areas about a half of the population still
smokes, as opposed to under 10 per cent in the best educated, most wealthy, areas. Whereas
smoking in Europe began amongst the privileged, it is ending as a habit of the least advantaged.

Given that, historically, some 50 per cent of long term smokers have been killed by their habit and a
majority of the remainder disabled by it, such imbalances can significantly impact life expectancy
figures. It remains the case that in the least advantaged British localities life expectancy at birth is
about 10 years less than in the most prosperous districts. Although differences in healthy life
expectancy are harder to calculate accurately, the work of researchers such as Professor Sir Michael
Marmot and his UCL colleagues indicates that healthy life expectancy in poorer areas is around twenty years less than in the wealthiest ones1.

Such observations do not imply that continuing health inequalities are the fault of those who ‘voluntarily’ elect to behave in unhealthy ways. But they do mean that compared to the situation in Britain 100 or more years ago health inequalities are now more closely linked to potentially modifiable life style variations than to absolute material poverty, and factors like being unable to afford basic housing, heating and food requirements. It is also of note that:

- as deaths amongst children and adults under 70 because of infections and events like heart attacks and strokes has declined, so the relative significance of some previously less dominant causes of mortality has risen. For instance, there about a million people in the UK who have learning difficulties (PwLDs - once termed people with ‘mental handicaps’) sufficient to cause them appreciable disadvantages in life. Precise data are not fully available, but amongst the 100,000 plus individuals with the most severe intellectual impairments the risk of death before ‘retirement age’ has been estimated to be over 50 times the population average. If because PwLDs are often not in employment they are classified as being members of a ‘lower class’ this could increasingly influence modern statistics on health inequalities, as may a variety of comparable factors; and

- there is evidence that amongst older people (aged over 65) life expectancy in Britain has recently fallen by about a year, and that this has not occurred in other leading European nations. (Life expectancy amongst US working age adults has recently declined because of a prescribed and illicit opioid use related public health crisis – a so called epidemic of despair – which is not immediately related to UK public health trends.) It may be suggested that reductions in health related social care provisions have been at least partially responsible for the observed British declines in survival amongst vulnerable individuals like, for instance, women and men living with dementia.

To the extent that such concerns can be confirmed they demonstrate the fact that although much of the overall increase in life expectancy seen since 1900 has been due to environmental improvement and the alleviation of material poverty, good quality health care provision (including the supply of better treatments for currently incurable disorders coupled with public health programmes that effectively support protective behaviour changes) will be increasingly central to achieving further life expectancy gains in the period to 2050.

**The affordability of the NHS and ongoing pharmaceutical and allied innovation**

In the early 1950s the UK spent a little over 3 per cent of its GDP on the NHS, together with modest additional amounts on privately purchased health products and health and social services. This meant that Britain was at that time a leading global investor in health and related care. Today the

---

1 Michael Marmot’s most recent book on social positioning and health is entitled *The Health Gap: the challenge of an unequal world*. See https://www.bloomsbury.com/uk/the-health-gap-9781408857991/
equivalent percentages (notwithstanding relative declines in areas such as the originally local authority run district nursing service, along with transfers of activity from health to social care) for the NHS alone is about 8 per cent of GDP. Using the most recently agreed international definitions, the UK in total spends a little over 10 per cent of its GDP on health and related care.

Accurate and meaningful international comparisons are difficult to make. But the interpretation offered here is that although the UK remains in real per capita terms one of the world’s major investors in health and related social services, it has to a degree fallen behind European counties like France, the Netherlands, Sweden and Germany. This is so in terms of both funding and some aspects of service quality, most notably outcomes – see, for instance, http://www.commonwealthfund.org/~media/files/publications/fund-report/2017/jul/schneider_mirror_mirror_2017.pdf

Critics may argue that – at worst – the centrally driven pursuit of cost effectiveness combined with the in some respects perverse politics of NHS and social service funding and a lack of the public and political will needed to maintain a strong and well informed focus on both welfare improvement and industrial success has impeded the evolution of the health service as a high quality service provider and as a good place for health and social care professionals to work in. However, the scale of the problems that exist should not be overstated. An additional 1-2 per cent of GDP, coupled with reforms that allow committed professionals to work to the best of their ability, could well prove sufficient to confirm the UK health and social care system as not just one of the most cost effective in the world, but the best the British people can afford.

In response to claims that providing world-class health and social care has become unaffordable for this country and/or that the current model of pharmaceutical and allied biomedical innovation is economically unsustainable it is in summary worth highlighting the facts that:

- the UK’s total spending on health and social care is amongst modern OECD nations little more than average. A significant number of successful countries have systems which account for a greater GDP proportion than is spent in Britain;

- population ageing has changed the balance of health and social care demands, and imposed some new costs. It has also changed ratios of ‘working age’ people to others in the community. But in recent decades the magnitude of these effects has been limited in the UK as compared to the situation in nations like, for example, China. To date the net impact of population ageing on the NHS has been modest compared to factors such as increased labour costs. Instead of implicitly regarding more people living into later life as a problem, policy makers should arguably focus more on ensuring that Britain derives maximum benefit from people in their 60s, 70s, 80s and beyond being able to enjoy full lives, including opportunities to work productively in both the formal and informal sectors of the economy; and

- the total amount of NHS resources spent on medicines and other pharmaceuticals, including new products, has in manufacturers’ received price terms fluctuated at around 10 per cent
of total health service costs for several decades. It is untrue to suggest that pharmaceuticals have imposed or are imposing unsustainable cost pressures on the NHS.

In the last context the reality is that more effective medicines and vaccines have over the lifetime of the NHS contributed significantly to improving health outcomes within a tightly regulated and cost controlled environment. Pharmaceutical research and production have also had a positive overall effect Britain’s economy. A key challenge for ‘Brexit Britain’ will be to provide a setting in which private companies and other foreign agencies still wish to invest, and in which public and private sector actors can work in partnership to foster innovation and produce valued goods and services.

**Pharmaceutical sector and other life science industry policy options**

The Table on the next page provides an outline of some of the main events relating to the development of the UK’s present system of medicines regulation, pricing and biomedical research and development funding. In the period between Britain joining the EU in the early 1970s and the referendum on leaving the Union in 2016 the publicly and privately funded UK life sciences base developed strongly. Through the work of bodies such as NICE and the MHRA, coupled with the activities of the European Medicines Agency in London, this country also played increasingly important European wide roles in fields such as medicines licensing and evaluation.

Global pharmaceutical companies were encouraged to invest in areas ranging from production to the location of senior staff with strategic management responsibilities in the UK. This was because – in addition to the strengths of domestic assets like Britain’s Universities and the NHS – this country was able to offer an English speaking point of access to Europe’s large ‘single market’. This currently accounts for a quarter of global pharmaceutical consumption by value. The UK figure alone is about 2 per cent.

However, the prospect of leaving the Union on as yet uncertain terms has led to fears that Britain’s future capacity to attract ongoing industrial investment will decline. Notwithstanding the possibility of new opportunities for income generation emerging, this would in time negatively impact on the nation’s capacity to provide high quality health and social care to its citizens.

If in future significant divergences between European and British regulatory, intellectual property, customs and excise, population movement and other social and economic policies were to occur, this could well result in not only growing financial losses during the 2020s but a range of public health problems. Such threats should not be exaggerated. But examples of what a poorly organised, disruptive, exit from the Union could, especially if coupled with other sub-optimal domestic policies, cause include:

- failures in supplying existing medicines in both UK and Europe, due to marketing authorisations losing their validity and/or delays in the transit of products across the UK’s borders with the EU;
# The Development of the UK Pharmaceutical/Life Sciences Sector and its Economic, Regulatory and Political Environment 1948-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948</td>
<td>The NHS is established and the ABPI set up</td>
<td>The relationship between the NHS and the pharmaceutical industry was originally envisaged as symbiotic. More effective medicines would enhance health care outcomes, and a successful pharmaceutical industry would enable Britain to pay its way in the post-imperial world.</td>
</tr>
<tr>
<td>1952</td>
<td>Prescription charges introduced</td>
<td>Aneurin Bevan resigned over the planned imposition of prescription charges, which in the invite were introduced by a Conservative government in late 1952. This incident may in part be taken to illustrate differences in attitudes towards medicines seen as commercial goods and care as a human relationship based process.</td>
</tr>
<tr>
<td>1957</td>
<td>The Voluntary Price Regulation Scheme (VPRS – later the PPRS) was instituted</td>
<td>The VPRS initially served to calm political fears that the NHS was paying too much for medicines albeit in reality it linked NHS prices to export prices, which historically had been relatively high.</td>
</tr>
<tr>
<td>1960</td>
<td>The Thalidomide tragedy begins to unfold</td>
<td>The Thalidomide tragedy, which had been introduced in Germany as an over the counter medicine only three years after its original synthesis but was never licensed if the US because of the actions of an FDA staff member, profoundly changed attitudes to medicines regulation. In the UK it led to the 1965 Medicines Act.</td>
</tr>
<tr>
<td>1973</td>
<td>The UK joins the European Union and European Patent Convention is signed</td>
<td>The EPC came into force in 1977. It provided EU members and associated States with a more efficient way of securing Europe wide intellectual property protection.</td>
</tr>
<tr>
<td>1978</td>
<td>The VPRS becomes the Pharmaceutical Price Regulation Scheme – the PPRS</td>
<td>The effectiveness of NHS price regulation was enhanced as the system evolved. The removal of the word voluntary in part served to highlight the fact that even in the 1970s the government could if needs be invoke statutory powers. The PPRS employed a portfolio approach which set permissible costs as percentages of NHS sales and pegged profits to the historic value of capital employed in the UK.</td>
</tr>
<tr>
<td>1978</td>
<td>The 1980s US pharmaceutical patent life extension, followed by comparable European reforms</td>
<td>In the US the Hatch-Waxman of 1984 extended pharmaceutical patent terms by four years, but also made it easier to introduce lower cost generic medicines once patents expired. Europe responded at the end of the decade by introducing Supplementary Protection Certificates, which had a similar effect.</td>
</tr>
<tr>
<td>1995</td>
<td>The European Medicines Agency is established in London</td>
<td>The siting of the EMA in London was celebrated as a significant boost to the strength of the UK pharmaceutical and wider life sciences sector.</td>
</tr>
<tr>
<td>1999 and 2003</td>
<td>NICE and the MHRA created</td>
<td>NICE pioneered the evaluation of medicines using a cost per QALY methodology which can be questioned, but arguably served to prevent NHS purchasing powers being used to drive down new medicines prices to damagingly low levels. The creation of the MHRA helped Britain become a world leader in the regulatory science sphere.</td>
</tr>
<tr>
<td>2005</td>
<td>A new version of the PPRS is agreed, and the OFT establishes a market study</td>
<td>The OFT, in the light of the creation of NICE and arguments put forward by the supporters of its cost per QALY methodology, published in 2007 a report highly critical of the UK PPRS. The OFT was itself superseded in 2014.</td>
</tr>
<tr>
<td>2006</td>
<td>The Cooksey Review of health sector research is published on behalf of the Treasury</td>
<td>Sir David Cooksey’s review questioned the value and structures underpinning health related research in Britain, and also stimulated new approaches to medicines licencing.</td>
</tr>
<tr>
<td>2011/12</td>
<td>Innovation Health and Welfare is published in 2011 and the Health and Social Care Act passed in 2012</td>
<td>The Department of Health’s Innovation Health and Welfare report highlighted the importance of therapeutic and other forms of innovation in and led to a programme aimed at enhancing the uptake of new technologies. The HSCA led to major changes throughout the NHS, including the creation of NHS England Public Health England.</td>
</tr>
<tr>
<td>2014</td>
<td>A new version of the PPRS is negotiated and the Accelerated Access Review commissioned. (The final AAR report was published in 2016)</td>
<td>The PPRS has a number of inherent strengths. It links health and industrial policy objectives and allows companies’ earnings to be regulated on a portfolio rather than a product by product basis. The 2014 agreement placed a ceiling on total NHS pharmaceutical costs. But because money returned did not find its way back to local budget holders the full benefits of this approach were not realised from a patient and industry standpoint.</td>
</tr>
</tbody>
</table>
The Frances Crick Institute is a partnership between several London Universities (including UCL), the MRC, the Wellcome Trust and Cancer Research UK. It promises to accelerate progress in the biomedical sciences and cancer care. Without appropriate policies there is, however, a risk that 2016, the year of the Brexit referendum as well as the Crick Institute’s opening, will prove to have been a high point in the UK’s record as a global centre for bio-scientific research.

The expanding role of NHS England as a central national purchaser of innovative medicines with strong monopsony powers and a reduced need to respond to NICE judgements or local preferences has both positive and negative implications. On the one hand the NHS should be able to save money on drug and allied purchases. On the other hand a more hostile economic environment may discourage life sciences investment in the UK or even globally, were the NHS example to succeed in leading the world in driving down the returns on bio-pharmaceutical/bio-medical R&D. From a patient viewpoint it would also be unfortunate if future purchasing strategies were to reduce the capacity of clinicians to choose between innovative medicines for given indications that have different modes of action.

The life sciences ‘sector deal’ announced in 2018 showed that leading pharmaceutical companies are still confident enough to invest in Britain’s science base. But against this, events such as the departure of the EMA to Amsterdam reflect the fact that the country is at risk of losing other industrial investment. The result of this could be that in the medium to long term Britain will be less able to fund good quality health and social services of all types, from disease prevention to cancer treatment and dementia care.

- an increasing reluctance on the part of innovators to launch beneficial new products in the UK. This would delay NHS patient access to better treatments and decrease the funding available for conducting clinical trials in this country, to the detriment of both NHS and University finances;

- a decrease in the opportunities available for the MHRA and partner organisations to undertake income generating work relating to approving medicines and other products for use in the EU, while simultaneously increasing the costs involved in running a free standing UK system. This would progressively undermine the UK’s influence in the regulatory arena, which could in turn inflict further socio-economic damage;

- a weakening of the NHS and of the UK life sciences research base as a result of well qualified European and other ‘international’ staff being willing to accept employment in this country; and

- increases in the relative costs of making and supplying medicinal and related products from plant located in the UK as opposed to ‘mainland’ Europe or elsewhere, coupled with increasing incentives to relocate staff with global/strategic roles in settings such as the Benelux countries and the US.

It is to be hoped that many if not all these unwanted consequences of change will be avoided. However, there is also a possibility that (despite the fact that many people who voted for leaving the UK believe that this will permit increased NHS funding) were the UK economy as a whole to reduce in size rather than grow after Brexit this will increase the future financial pressures on all public services. If that transpired the reaction of NHS England in its position as a de facto monopsony...
purchaser of medicines and allied goods operating with little external control might well be to bear down further on innovative medicines pricing and use.

There might well be popular support for such a ‘crisis’ response. However, there is already evidence that NHS patient access to new medicines in the years immediately after their launch is often substantially less than that enjoyed by most US patients and health service users in countries like France and Germany. If this situation were to be further exacerbated it would add to the challengers faced by research based pharmaceutical companies in the UK.

Were potential investors to respond by further reducing the flow of capital into and within this country this could in time serve to increase to even higher levels the perceived need for ‘therapeutic austerity’ within the NHS, creating a vicious cycle that could well prove hard to break. To avoid such dangers policy makers need to ensure that health, industrial and other development strategies are in line with each other and consistent in the pursuit of public interests as a whole, rather than being fragmented by factional conflicts.

**Conclusion**

The original purpose of the NHS and allied ‘post-war’ reforms was to create a fairer society, and to enable the British people to attain the highest standards of personal health, community wellbeing and national prosperity achievable. There have long been interests that question the viability of providing the best possible universal health and social care on a publicly funded basis, as opposed to merely the most cost-effective service the electorate will accept. But there is no logical reason to believe that, if sufficient will were to exist on the part of voters and stakeholder groups, Britain cannot now or in the future afford to offer health and social care standards and outcomes as good as those achieved anywhere else in the world.

This is so with regard to functions from disease prevention and optimising overall public health through to permitting seriously ill individuals access to sophisticated personal medical care and/or the person centred social and community nursing support needed to make living with long term illnesses as positive an experience as possible. However, this is not to deny that at the political and policy levels there are many barriers along the road to this end. This may become increasingly so if ‘Brexit Britain’ is for an extended period faced with a multiplicity of urgent if ultimately relatively unimportant, essentially distracting, bureaucratic and allied challenges to overcome.

Against this complex background these brief UCL School of Pharmacy notes cannot offer any form of comprehensive or detailed prescription. But in conclusion the following suggestions are offered:

1. In April 2017 a House of Lords Select Committee report on the sustainability of NHS and adult social care (see [https://www.parliament.uk/nhs-sustainability](https://www.parliament.uk/nhs-sustainability)) was critical of the quality of long term strategic thinking about service development amongst policy makers and service commissioners and providers alike. While many people now have the word strategy in their job titles, most are in reality pre-occupied with short term acute problem solving rather than identifying fundamental goals and forming long term plans for securing them. This analysis has implications for not only the health sector but the quality of all
modern British political discourse and policy making. In the context of the topics touched on here it should reinforce awareness of the need to ensure that life science industry and health and social care development strategies are not only based on robust information and intelligent projections of future need and opportunity, but are consistent with each other and can be implemented in ways which avoid harmful conflict.

2. NHS England has since its establishment in 2013 faced a daunting task, given the immediate realities of growing expressed demand, limited financial resources, unresolved structural divides and persistent workforce concerns and frustrations. In such circumstances a desire to cut spending on new and existing pharmaceuticals is understandable, especially given the social distance between the separate businesses of (labour intensive) care delivery on the one hand and (risk capital dependent) bio-science based innovation on the other. However, good market and competition governance demands that both monopoly and monopsony powers are subject to scrutiny and where necessary third party control aimed at protecting long term as well short term public interests. Seen from this perspective it might be concluded that not only should the relationship between NICE and NHS England be independently reviewed with a view to ensuring that NICE judgments on NHS patients’ treatment entitlements retain an appropriate degree of authority, but also that wider (long term health and other socio-economic) UK and global public interests in bio-scientific research and development are adequately understood and protected in the future Britain.

3. Regarding the social determinants of health and health inequalities, differences in the life expectancies and healthy life expectancies of members of more and less advantaged groups are likely to persist in evolving settings whatever the efforts made to eliminate them. It is also true that in the last hundred or so years the absolute scale of ‘basic poverty’ driven inequalities as revealed by indicators like infant mortality has been significantly reduced in Britain and elsewhere. Yet such observations should not be taken to mean that further action cannot or should not be taken to reduce health inequalities. Opportunities exist in all spheres, ranging from education and housing through to the funding of effective public health programmes and clinical care per se.

4. In the specific contexts of hospital and community pharmacy, the primary role of the profession is to support the optimal use of medicines amongst all social groups for not only disease treatment but also for primary prevention. Pharmacists may also be able to play extended roles in areas ranging from enabling the public to use health related (diagnostic and therapy identifying) IT resources to best effect through to fostering behavioural changes that reduce risks to individual and population health.

One implication of this last observation is that in future it will not be sufficient for health professionals such as doctors and pharmacists just to have expert knowledge about diseases and the drugs and other interventions that can prevent and/or treat them. They will increasingly need to have insight into and understanding of the people who experience illnesses and choose whether or not to use the treatments available, and the social forces that shape personal health behaviours and determine the levels of care and support available to individuals, families and communities.

END