UCL SCHOOL OF PHARMACY

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UCL School of Pharmacy New Year Health Policy Briefing, January 2021

Key Point Summary

This UCL School of Pharmacy Briefing covers a range of broad health policy issues directly and indirectly linked to the impacts of the Covid-19 pandemic. It complements Professor Sir Roy Anderson's UCL School of Pharmacy/Royal Pharmaceutical Society New Year Lecture on *The SARS-CoV-2 Pandemic: uncertainties and challenges to be overcome in 2021.*

The UK nations are currently facing a third wave of SARS-CoV-2 infections and the prospect of a total Covid-19 epidemic death toll of over 100,000 by the Summer of 2021. However, despite past concerns British policies are robust in relation to the roll-out of vaccination and other key aspects of controlling the epidemic. This analysis supports initiatives like extending the period between primary administration of vaccines and the supply of booster doses to up to 12 weeks.

Planned UK NHS spending stood at £150 billion in 2019/20. An additional £60 billion of emergency health and social service funding has been available this year. The level of emergency funding is set to decline sharply in 21/22, but current plans indicate that underlying NHS funding growth should continue at about 4% in real terms to the middle of this decade. Depending on the rate of economic recovery from the effects of the Covid-19 pandemic and the uncertain longer-term effects of Brexit on both economic growth and Governments' abilities to raise taxes, difficult health care financing choices may well have to be made later in the 2020s.

The UK's Covid-19 performance has raised important questions about the quality of social care for groups like older individuals in need of residential or nursing home care, which currently costs about £30 billion in England alone. Public spending per head on social services as is about 50% higher in Scotland than in England, where if people with assets who have conditions like dementia are to be protected from catastrophic financial risks (and others provided with better services) public spending may need to rise by over £5 billion. One future choice relates to whether compulsory insurance or a new tax on people aged 40 and over should be introduced. Another set of questions links to whether the NHS should take over responsibility for providing social care or whether some areas of what is presently health service responsibility might eventually move to Local Authorities.

It was announced in August 2020 during the early stages of the Covid-19 emergency that Public Health England, established by the Cameron-Clegg coalition in 2013, was to be dissolved. A new agency, the National Institute for Health Protection, is due to be formally established in the Spring of this year. Many aspects of how this body will help to improve public health and create a better balance between centralised power and the need for flexible and appropriate local action remain uncertain but deserve informed public debate.

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During 2020 at least 400,000 NHS cancer patients had their care affected to varying degrees. As and when immunisation and better medicines permit a return to more normal working sustained effort will be needed to recover and improve NHS cancer care quality. Task such as clearing waiting list back-logs and minimising the harm caused by, for example, declines in early diagnosis rates may lead to increased oncology cost pressures throughout 2021 and 2022.

The pharmaceutical industry has been an important contributor to the UK economy since the 1940s. Its value is highlighted by the Oxford/AstraZeneca vaccine partnership. Britain still exports approaching £30 billion of pharmaceuticals a year and benefits from over £5 billion of industry research spending annually. At the same time UK NHS pharmaceutical spending net of discounts has been constant at around 10 per cent of total NHS costs (about £15 billion in 2019) for several decades. Creating an excellent post Brexit-regulatory environment might – despite the European Medicines Agency's recent move to Amsterdam – attract future research and manufacturing investment to the UK. But if earnings from NHS sales and the UK's uptake of effective new treatments fall further behind rates achieved elsewhere the ability of the pharmaceutical industry to support the UK economy will very probably fall during the 2020s.

There are some 13,000 community pharmacies and over 30,000 community pharmacists in the UK. Their capacity to maintain medicine supplies and offer a wide range of conveniently available health and self-care support services has been demonstrated during Covid-19 pandemic. When the infection is controlled bureaucratic and sectional interest driven rigidities will tend to return. But policy makers should be aware that given the political will it would be possible for community pharmacy to contribute more to not only emergency measures such as making SARS-CoV-2 vaccines and testing widely available but improving public access to clinical services such as hormonal contraception supply and the prevention and treatment of common serious conditions like vascular diseases, diabetes and chronic respiratory disorders.

Introduction

At the start of 2020 few people outside China were aware of the disease that rapidly became known as Covid-19. The UCL SoP/RPS New Year Lecture given last January discussed advances in oncology research and opportunities for cancer prevention, early detection and treatment. It highlighted the case for making improving cancer outcomes the central health care goal for the 2020s. But in the twelve months since then there have been in the order of 2 million deaths due to SARS-CoV-2 across the world. Health and wider social and economic policies have become focused on controlling the pandemic and stemming the harm it is causing. The 2021 UCL SoP/Royal Pharmaceutical Society lecture is to be delivered by Sir Roy Anderson (Professor of Infectious Disease Epidemiology at Imperial College) who will speak to the title '*The SARS-CoV-2 Pandemic: uncertainties and challenges to be overcome in 2021'*.

The UK has suffered one of the highest per capita Covid-19 related burdens of any nation. There is now hope that vaccination – supported by ongoing public health measures, better rapid testing technologies and effective medicines use – will bring the acute phase of the British epidemic to an end by the early Summer of 2021. Yet even if this promise can be translated into reality the total UK death toll due to Covid-19 will by then have risen to well in excess of 100,000 people. Despite the fact that the average age of death from the infection is over 80 years, life expectancy at birth has already fallen by a year as compared with the 2019 figure because of the pandemic's UK impacts.

In addition to the mortality and morbidity associated with Covid-19, economic damage resulting from the disease and the measures taken to control it has exacerbated social problems like unemployment and health inequalities linked to ethnicity and social class. Individuals living in multigenerational households including people who have not been able to work at home have been at raised risk of infection.

The 2020/21 UK GDP will be 10% or more below the previous year's figure and the national debt will have risen by over 20%, or £400-500 billion, by April 2021. This compares with a total UK NHS cost of approximately £150 billion in 2019/20 (7.5% of GDP in that year).

The extent to which the UK economy will recover during 2021/22 is uncertain. This is not least because recent increases in the infectivity of SARS-CoV-2 in Britain is extending the intensity of the controls required to limit its spread until immunisation adequately protects the population. In addition, Brexit might, despite the trade deal with the EU announced shortly before Christmas, generate deficits that over time prove as or more serious than those due to the Covid-19 pandemic.

There will be no overall 'Brexit bonus' in the foreseeable future. Commonly quoted estimates indicate that by the mid-2020s the British economy will be 4% smaller than would have been the case if Britain had remained in the Union. Such figures may not fully reflect the long term impacts that leaving will have on activities like financial services provision (which was in 2019 responsible for almost a fifth of total UK export earnings) or the past, present and future inward flows of capital investment needed to provide future employment. Those families and regions that are already disadvantaged will, failing very large scale redistribution programmes, suffer the greatest relative losses as the 2020s unfold.

In the immediate future containing the UK Covid-19 epidemic via mask wearing, lock-downs and other public health interventions – including the fastest possible vaccination roll-out involving measures like extending the time between giving primary and booster immunisations – is the most obvious national priority. Clearing NHS waiting lists and back-logs in areas like cancer care and helping the entertainment, catering and travel industries to recover in order to maintain employment are also tasks that will require attention in the coming year. So too, as Professor Anderson highlights in his 2021 New Year Lecture, should helping low and middle income countries to control their domestic infection rates.

But within the UK Covid-19 has revealed other deep rooted structural and performance issues which may in practice take longer to resolve. They range from the challenges of improving overall health and social care quality during what may prove to be an extended period of limited economic growth to protecting British public interests in pharmaceutical innovation and production and strengthening the contributions of professionals such as community pharmacists to self-care facilitation and clinical services provision.

During 2020 multiple questions were raised about the quality of Britain's response to its Covid-19 epidemic. Shortfalls included delays in taking the actions needed to prevent the disease spreading and safeguard people living in care homes. NHS hospital discharges to residential and nursing homes of individuals who subsequently proved to be infected caused many thousands of potentially avoidable deaths and demonstrated a lack of insight into health related social care for older people. There were also well publicised problems with obtaining supplies of protective equipment for health and social service staff and with providing Covid-19 testing in ways that effectively reduce infection risks, difficult though this last task has proved in Britain.

The seriousness of the issues underlying the UK's relatively high SARS-CoV-2 death rates should not be denied. Detailed inquiries into why failings occurred and the lessons that should be taken from

them ought to be undertaken as soon as possible after vaccination programmes have brought the UK epidemic under secure control. However, it is also the case that many aspects of Britain's pandemic performance and that of the wider global community can be celebrated.

In addition to the individual efforts of millions of health and social care workers and private citizens to serve community interests (including those of young people who have restricted their activities and had the quality of their education impaired in order to protect older individuals) the licensing by the UK's Medicines and Healthcare products Regulatory Agency (MHRA) of the Pfizer/BioNTech and Oxford University/AstraZeneca vaccines by the end of 2020 are examples of success. So too is the RECOVERY trial's identification of dexamethasone as an effective treatment for later stage Covid-19.

Maintaining trust in medical, pharmaceutical and nursing expertise and the capacity of British institutions to identify and implement fair and effective policies is in itself an important policy goal. It is relevant, for instance, to maintaining high vaccination acceptance rates, without which vulnerable people will be harmed and the UK may face further lock downs in the winters of 2021 and possibly 2022. It is of note that whatever the initial limitations of their responses to Covid-19 (which may in part have stemmed from the heavy leadership focus on Brexit during the first quarter of 2020) all the UK nations are now displaying high levels of competency, not least in relation to maximising the benefits of immunisation.

Funding the NHS during the 2020s

Ongoing economic growth will in time counterbalance the costs of Covid-19 and the more immediate financial consequences of Brexit. Nevertheless, throughout the next few years opportunities for increasing public service funding will be limited. This is partly because in order to attract capital investment needed for future prosperity Government may well need to offer investors a stable low tax environment.

NHS funding increased relative to GDP in 2019/20 (when it grew by about 4% in real terms) and in 20/21. This year emergency health and social service spending totalled some £60 billion over and above the previously planned health budget of £150 billion. The outlook for next year is uncertain in as much the rate at which extra 'Covid funding' – currently estimated to be £20 billion in 21/22 – will be withdrawn may be subject to variation. However, present plans indicate that underlying health service expenditures should continue to increase by 4% a year in real terms until 2024.

Problematic choices are more likely to emerge in the second half of the 2020s. Many health sector observers believe that to maintain care and treatment standards relative to those found in Europe and other advanced parts of the world health service NHS funding will need to go on increasing by at least 4% per annum into the 2030s. But pressures on the Treasury mean this could prove hard to achieve. The NHS is currently very popular. Nevertheless, Government may by the middle of this decade be faced with difficult choices relating to either increasing taxes, curtailing publicly funded health service spending growth or introducing radically changed financing arrangements. The border between health and social care is one area where opportunities for the latter may emerge

Social care

When the NHS was first formed life expectancy for people living with disabilities and advanced diseases was a decade or more shorter than it is today and the proportion of elderly and frail people in the population significantly lower. Of the care that was provided for such individuals much was delivered informally by (normally female) family members. Limited publicly funded support was

available via district nurses, hospitals and Local Authority facilities provided under the auspices of the 1948 National Assistance Act.

Social work as a profession did not exist in its modern form until the 1960s and 1970s when it emerged as a Local Authority provided set of services for people classified as not in need of medically directed care. In parallel with this development Local Authority responsibility for delivering NHS services like health visiting and community nursing ended in 1974. From shortly after then social care defined mainly in terms of residential and home care for elderly people increasingly became provided by privately owned for-profit organisations paid by Local Authorities or individual service users

There are today significant variations in overall social services funding across the UK. In Scotland, for instance, (where personal care is free) annual public spending on social services overall is about £450 per head. This compares with little more than £300 in England. In the latter context the latest figures from the research agency LaingBuisson (see Box) show a total social care spend of £30 billion in 2019/20. This covers care in residential settings for people aged 65 and over; care in residential settings for younger adults aged 18-64; homecare for people mainly aged 65+; and supported living for people of all ages. The £30 billion estimate (which compares with an English NHS spend of about £130 billion) covers service outlays only and includes private as well as public contributions. Private payments represent around a half of residential care outlays.

The 20th edition of LaingBuisson's Care Homes for Older People UK Market Report will be published on January 20th 2021. It will present new data on social care and offer an extended analysis of the policy options available in England and the other UK countries .

There are concerns about social care quality and funding throughout the UK. The NHS was financially protected after 2010 and the introduction of 'austerity' focused public service funding. By contrast social and other Local Authority services in England were subjected to cuts of around 30%. Despite recent increases, social care outlays (net of Covid-19 emergency funding) still stand – in constant price terms – at about the 2010 level. In relation to residential and nursing home care people who develop conditions such as Alzheimer's Disease and who own a house or other assets are exposed to potentially catastrophic financial risks in a way that similarly aged individuals with diseases such as cancers are often not. Those funding their residential and nursing care privately are in many instances also subsidising the care of those being nominally financed by Local Authorities.

Politicians of all parties have acknowledged a need for reform and various proposals have been advocated. The best known of these is the Dilnot Commission's (2011) suggestion that each individual's personal care costs should be capped at £35,000, excluding daily living expenses. Other groups have suggested caps of £50-70,000. The overall public cost of protecting individuals and families from catastrophic social care costs and of improving the quality of care for those without assets has been put at over £5 billion. There is some support for special (hypothecated) national or local taxes for the funding of residential care for older people, payable by citizens aged 40 and over. This fiscal approach has already been pioneered in Germany and Japan. Another public policy choice is whether to shift responsibility for social care provision to the NHS, or to leave it in the hands of regulated private sector actors largely commissioned by Local Authority based purchasers.

It remains to be seen when and how the present government will take action. Some form of hypothecated taxation or obligatory private insurance supported social care funding may become increasingly attractive to central decision makers, at least in England. This might in time precipitate pressures to move additional social health linked commissioning responsibilities to Local Authorities,

leaving the nationally funded health service with a narrowed role. The question of whether or not such a policy, or the alternative of extending NHS care to include social care, might increase or decrease welfare will require informed public debate in the post-Covid environment.

Establishing the new National Institute of Health Protection

There was no mention of major health service reforms during the 2010 General Election. Yet the Cameron administration's Health and Social Care Act (the HSCA, enacted in 2012) fundamentally restructured the NHS in England. Amongst many changes it eliminated Primary Care Trusts, transferring their responsibilities to a range of new and existing bodies. Some public health functions went to Local Authorities while Public Health England (PHE) was created as a Whitehall oriented body concerned with national matters. From a critical standpoint these reforms might be seen as dividing the public health community and weakening its abilities to effectively influence the NHS and guide or publicly challenge central government policies. Nevertheless, there was considerable support for the creation of PHE and respect for the expertise of its staff.

In subsequent years NHS England has developed strategies aimed at fostering more integrated approaches to local health care delivery. This can be seen as seeking to roll-back the effects of some of the HSCA changes. Then in early 2020 the new Johnson government was confronted with the Covid-19 challenge.

As already noted, Britain's responses in the first few months of the ensuing emergency lagged behind those of nations like Germany, South Korea, Taiwan and the People's Republic of China. PHE and its remit were seen by some as partly responsible for this situation. It was against this background that in August 2020 it was announced that PHE was to be dissolved and a new body, the National Institute of Health Protection (NIHP), formed.

It is currently intended that the NIHP will be formally instituted in the Spring of 2021, at around the time the acute phase of the Covid-19 pandemic may be being brought under control in the UK. There are many issues to be clarified as to how the NIHP will be structured and function in the years ahead and the extent to which the new body will influence public health arrangements outside England. Examples of strategic concerns to be addressed include:

- **Developing a robust balance between decentralised/local and centralised/national inputs to public health policy formation and implementation.** During the Covid-19 epidemic government was on occasions alleged to be adopting an unduly centralised, locally sub-optimal, approach to, for instance, test and trace service development. Also, although the architects of the HSCA said it was returning 'public health' to local government, PHE was for practical purposes a central government health agency.
- **Combining protection from external threats like infections with support for voluntary lifestyle change and long-term health improvement.** While short-term infectious disease protection can in some contexts be achieved on a 'command and control' basis, long term life style change is much more likely to require less directive interventions aimed at fostering voluntary social change. Whether a single agency can successfully lead both types of approach is yet to be demonstrated. It is also of note that although Covid-19 has highlighted the fact that large scale infectious disease control skills need to be held available in even the most advanced nations, reducing the burden of 'non-communicable' illnesses and improving access to progressively more effective treatments will have much greater life-saving potential in 'normal times'.

- **Providing an adequately protected and audible 'public health voice' when there are conflicts with (on occasions less legitimate) political interests.** The history of organisations such as the Health Education Council (1968-87) illustrates the fact that disagreements can easily arise between committed health improvement advocates and policy makers seeking financial or other ends. So too did the struggle for better living conditions in Victorian Britain.
- **Ensuring that both NHS and social care planners and providers with appropriate public health support.** The HSCA strengthened local government access to public health advice but may at the same time, despite the creation of joint planning arrangements, have reduced its inputs to and ability to challenge parts of the health service, including major Hospital Trusts.

Cancer prevention, detection, treatment and care

In 2020 the SARS-CoV-2 virus killed a total of about 80,000 people in Britain and caused the suffering of millions more. The scale of this tragedy, contained though it was by measures like lock downs and reductions in social contacts, should not be understated. But neither should the fact every year cancers still – despite the advances of recent decades – cause about 165,000 UK deaths amongst people who are on average more than 10 years younger than those who have died from Covid-19.

Data like these underline the case for sustaining and where possible increasing investment in cancer research, charitable funding for which has been approximately halved in the last year. (It is of note that the technology underpinning the Pfizer BioNTech vaccine stemmed initially from cancer research programmes – their potential benefits extend far beyond providing better cancer therapies.) If during the 2020s the extraordinary level of global effort put into building scientific understanding of SARS-CoV-2 infections how to control them could be focused on improving cancer prevention, testing and treatment then the burdens it imposes would be significantly reduced and other gains generated.

It is estimated that in the seven months from early March to late September 2020 about 3 million fewer people in Britain than expected took part in cancer screening programmes. This has probably led to 40,000 fewer starting treatment than would have been so if the Covid-19 outbreak had not disrupted service provision and reduced uptake. It may also be estimated that, despite efforts to manage the situation as effectively as possible, in the order of 400,000 NHS cancer patients had their care affected by treatment delays during 2020.

One conclusion to be drawn from such figures is that even if the Covid-19 epidemic in the UK is effectively controlled by the summer of 2021 there will still be significant and in some cases long lasting residual problems for the health and allied services to overcome. In addition to guarding against the risk that (because herd immunity is unlikely to reach levels sufficient to eliminate the infection nationally or internationally) SARS-CoV-2 will return to threaten large numbers of vulnerable people in the winter of 2021/22, the NHS will have to treat cancers and other disorders that might have proved curable or less severe had they been diagnosed and treated more promptly. Awareness of this highlights the possibility that emergency NHS funding provisions may need to be extended throughout and perhaps beyond the coming year.

British interests in pharmaceutical innovation and production

The research based pharmaceutical industry has been an important contributor to Britain throughout the life of the NHS. It still exports approaching £30 billion's worth of goods annually, which after NHS discounts and repayments is about twice total UK-wide health service spending on medicines and allied goods. As well as adding to the scale of the overall economy (in gross added value terms the pharmaceutical sector was even before the impacts of Covid-19 and Brexit almost the same size as

vehicle manufacturing and twice that of the British aerospace industry) it is a major research funder and high value employment provider.

The UK has in overall terms been a low investor in R&D compared with its major economic rivals. Yet its record in the health sector is relatively strong. This is in part illustrated by the fact that British based pharmaceutical companies devote over £5 billion a year to R&D conducted in this country, representing almost a fifth of British business's total research spending.

The AstraZeneca/Oxford University Covid-19 vaccine partnership reflects the strength of the UK's biomedical base and the value of ongoing biopharmaceutical innovation. The Prime Minister has recently said he hopes that in future years the UK will develop as a 'life sciences super power'. Yet some policy influencers argue that Britain is too small to retain a major pharmaceutical base and that the NHS should pursue an all-out price minimisation strategy for branded as well as generic medicines. This is despite the existence of NICE and the Voluntary Price and Access Scheme (VPAS) for branded medicines, which caps total NHS medicine costs and limits pharmaceutical spending growth to a little over 2% per annum.

If Britain cannot succeed in areas such as pharmaceuticals its long-term capacity to provide world-class health and related services for its citizens is likely to fall short of expectations. There are fears that events like the loss of the EMA to The Netherlands will encourage companies to leave the UK or downgrade the importance of the UK market, especially if the discounted prices paid by the NHS for innovative medicines remain or drop further below those paid in other key countries. Despite claims that new treatments are becoming unaffordable, medicines and allied products in fact account for little more that 10% of gross NHS costs. This proportion has been broadly constant for several decades.

One approach to countering pharmaceutical sector decline could be for the MHRA – building on its recent successes with licensing Covid-19 vaccines – to take further steps towards being the most efficient and effective medicines regulator in the world. Combining a public interest oriented regulatory environment with the ability of the NHS to conduct high quality clinical trials offers a potentially attractive way forward. Yet if post-Brexit Britain wishes to recover its standing as both a pharmaceutical innovator and a manufacturer of modern medicines, vaccines and other high value health products radical actions may – despite budgetary pressures – be needed. It is arguably in the British public's interests for Government to do more to ensure not only that the health service pays amounts for new treatments that are closer to those found affordable in countries such as Germany, Switzerland and the US but also that the NHS's uptake of effective therapies after the MHRA has licensed them is at least as rapid as it is in other clinically advanced nations.

Community pharmacy contributions to self-care and primary care

During the UK Covid-19 epidemic community pharmacies have played an important and highly visible part in delivering continuity of prescribed medicines supply and access to other forms of support. In the 2021 roll-out of SARS-CoV-2 vaccination pharmacies and pharmacists ought also, in co-operation with general practices and PCNs, be able to play a significant role in enabling as many people as possible to gain rapid access to protection.

As primary care develops in the 2020s it should, subject to regulatory restraints and sectional interests, be possible for community pharmacy to extend its contributions to both professionally directed clinical care and the efforts of individuals and families to take increased responsibility for maintaining their own health. For instance, new near patient testing technologies and computer based assessment systems could allow pharmacists to become more actively involved in helping members of the public identify early stage health problems. In addition to improving the treatment of bacterial and viral

infections, examples of areas where there is evidence that pharmacists working in general medical practices and independent pharmacy settings could do more to enhance service provision range from supporting the use of all forms of hormonal contraception to the reduction of cardiovascular risks and the 'maintenance treatment' of respiratory disorders.

One of the positive lessons of the Covid-19 pandemic is that it has shown that rapid developments can take place when there is a shared sense of urgent need and a preparedness to question and when appropriate overcome counter-productive bureaucratic and allied impediments. The medical use of video consultations is a case in point, along with some forms of contraception supply. As 'normal life' is re-established flexibilities will tend to fade. But political decision makers and others concerned with generating better value for money and services that are genuinely focused on meeting changing health service user needs in more convenient ways should be aware that beneficial reform is possible.

Across the UK community pharmacy accounts – net of the NHS medicines and other products supplied – for little more than £3 billion (2-3%) of health service outlays. However, Britain's 13,000 community pharmacies and over 30,000 community pharmacists have the capacity to offer not only a universally recognised doorway to care but direct access to an increasingly important range of services and clinically effective treatments.

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