this week

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JOHN B HEWITT / ALAMY

Russian doctors urge Putin to end conflict

The calls of antiwar protesters in Manchester's Picadilly Gardens last week have been echoed by Russian medics

Thousands of Russian doctors and other healthcare workers have signed an open letter to President Vladimir Putin urging him to cease hostilities against Ukraine.

In their letter doctors, nurses, and paramedics said that they "strongly oppose the military actions carried out by Russian armed forces on the territory of Ukraine" and called for troops to be withdrawn. By 28 February 15 000 medical professionals across Russia had signed the letter.

"Our mission is to save human lives," the letter said. "At this difficult time for both countries, we call for an immediate cessation of hostilities and for resolution . . . exclusively by peaceful means."

The letter emphasised that doctors' relatives, friends, patients, and colleagues were under attack. "There is not a single person among them who would benefit from the ongoing bloodshed," they wrote.

"Human life is priceless. It takes a moment to be killed in action, while the treatment and recovery of the victims can take years. And for the moments of today's war, we will pay for many years after. Therefore, following our oaths and maintaining a humane and equal treatment of all lives, we demand an immediate suspension of all operations with the use of lethal weapons."

Ksenia Suvorova, a doctor by training and founder of the Russian evidence based medicine news site MadMed.Media, who coordinated the letter, told *The BMJ* that many signatories had friends or relatives living in Ukraine. "My best friend lives in Kharkiv. Luckily for her she was able to escape and flee the city on the first day, when Russian tanks were coming towards her home. This is not the only story some of us have received from Ukraine from our friends and families," she said.

Suvorova added that some medics in Russia were being urged to join the military operation in Ukraine. "Many people are seriously considering leaving," she said. "Of course, many of us are scared.

"It's difficult for all doctors, because we feel like we are living through a civil war, where society is divided into those who support the war and those who are against it. However, most doctors are against this. It is our duty to be sympathetic."

She added, "I am glad to see the number of people from the medical community who continue to sign our letter. It means that with each signature there is one more person against the war."

Gareth Iacobucci, *The BMJ*

Cite this as: *BMJ* 2022;376:o531

LATEST ONLINE

- Covid-19: Incomplete lists of vulnerable patients left many unprotected, desperate, and afraid
- Climate change is outpacing efforts to adapt, warns intergovernmental panel
- Drug distributors and Johnson & Johnson will pay $26bn, as America's biggest opioid settlement is finalised

SEVEN DAYS IN

Government's proposed 2% rise for consultants is an "insult," says BMA

The BMA has branded the government's proposed 2% pay award for consultants for 2022-23 as "paltry" and an "insult."

In evidence submitted to the Review Body on Doctors' and Dentists' Remuneration (DDRB), the government warned a pay rise higher than the 2% budgeted for would have consequences for recruitment of extra doctors and provision of services to patients.

But Vishal Sharma (left), chair of the BMA's Consultants Committee, disagreed, saying that "this paltry suggestion, which falls far below inflation, is an insult." He added, "The 3% award last year left consultants extremely disappointed, so for the government to now suggest an even lower figure that once again fails to address years of pay erosion will be met with anger and absolute dismay."

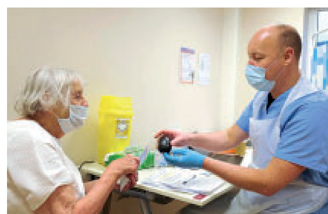
Senior doctors were already being driven away by punitive rules on pension tax, exhaustion, and plummeting morale, and now the government wanted them to take a real terms cut in pay, he said. "The government's argument that by restricting pay it allows them to hire more doctors is a hollow one. Without fair pay, England will be unable to hire and retain the doctors it needs."

Ingrid Torjesen, *The BMJ* Cite this as *BMJ* 2022;376:o509

Covid-19

GPs told to keep infection control measures

NHS England wrote to general practices saying that practice staff, patients, and visitors must continue to wear masks in healthcare settings. Staff who test positive for SARS-CoV-2 should also not attend work until they have had two negative lateral flow test results taken 24 hours apart, at



least five days after a positive test. The letter said staff should be able to get tests through the universal offer online until advised otherwise and community pharmacies until 31 March. In emergencies, regional testing leads should have a supply.

Staff burnout puts vaccine programme success at risk

The UK's covid vaccination programme has been a success and delivered value for money so far, but future success could be undermined by staffing constraints, the National Audit Office warned. The watchdog singled out primary care for praise, noting that GPs and community pharmacists had administered 71% of doses up to the end of October 2021, against a planned 56%. But it said "staffing remains a major risk, due to staff burnout, and the lack of surplus capacity in the healthcare system generally."

Mental health

NHS England sets out new access standards

People seeking mental health support in the community should get help within four weeks, while those in urgent need should be seen by a community crisis team within 24 hours, say proposed standards set by NHS England. The standards, which were consulted on last year, also mean people who present to emergency departments should get a face-to-face assessment by a specialist mental health liaison team within an hour of being referred. Work is now under way to outline how targets will be achieved.

Scotland

NHS recovery will be a challenge, watchdog warns

Audit Scotland has issued a blunt warning to the Scottish government that its pandemic recovery plans will be hard to achieve. It said the NHS was in an unsustainable financial position before the pandemic and was even worse today. Transforming the delivery of health and social care was the key to financial stability, it said, but it warned that this would be difficult to deliver against the demands of the pandemic and other policy initiatives, such as Scotland's plan to establish a National Care Service.

Privatisation

Challenge to US takeover of GP surgeries fails

Campaigners (below) against "NHS privatisation by stealth" have failed to persuade a High Court judge to quash a decision by the North Central London Clinical Commissioning Group, which allowed Operose Health, a subsidiary of the US healthcare giant Centene Corporation, to take over a swathe of general practices in north London. They said there had not been enough consultation before the decision. But Mrs Justice Hill said, "I consider that NCL complied with any duty to secure involvement or engagement that arose and so such departure from the guidance as there was had no material impact."

Workforce

Calls to end barriers for graduates from overseas

The BMA asked the home secretary to remove the £2389 residency application fee and any bureaucratic barriers so medical graduates from other countries can be granted automatic indefinite leave to remain in the UK without any cost to them. Chaand Nagpaul, BMA chair of council, said the fee, which is on top of the £2389 charge for each dependant as well as visa fees, amounts to a "punitive penalty for a workforce that the NHS simply cannot function without."

Polio

Vaccination is halted in Afghanistan after attacks

Eight polio vaccination workers were killed in four separate attacks in Afghanistan, prompting the Taliban to suspend house-to-house vaccinations in Takhar and Kunduz provinces. Violence against polio workers is a frequent problem in the country, but the latest, apparently coordinated attacks represent an escalation. No group has claimed responsibility. Polio vaccination rates in Afghanistan have gone up since the Taliban took power and roads became safer.

MEDICINE

Sexual health

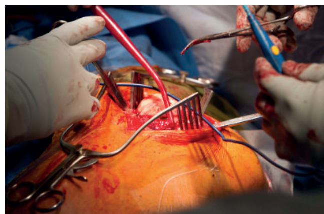
US authorises condom for anal intercourse

The Food and Drug Administration authorised the marketing of the first condoms specifically indicated to help reduce transmission of sexually transmitted infections during anal intercourse. A study of use of the ONE Male Condom by 252 men who have sex with men and 252 men who have sex with women found a total condom failure rate (slippage, breakage, or both) of 0.68% for anal intercourse and 1.89% for vaginal intercourse. Adverse events included symptomatic STI or recent STI diagnosis (0.64%), discomfort (1.06%), and partner urinary tract infection (0.21%).

ONE, the first condom able to advertise as preventing STIs in anal sex

NHS care backlog

Hospitals to revert to payments for activity



Ministers plan to reintroduce a "blended" version of the payment by results system, which was paused during the pandemic in favour of emergency block payments to give trusts more financial certainty while they were unable to operate at previous levels. From April trusts will receive a fixed amount of funding that will be based on expected activity and then a "top-up" if they exceed their targets for procedures such as hip (above) and knee operations, the *Telegraph* reported.

Waiting list patients get new online platform

Around 5.5 million patients of the six million in England waiting for a procedure are to be given access to an online platform called My Planned Care, which will give information about the average waiting time at their local hospital for their treatment. The platform will be expanded in the coming months to include personalised advice and support to help people stay well while they wait for surgery, said NHS leaders.

Research news

Study shows benefits of muscle strengthening

Between 30 and 60 minutes of muscle strengthening activity every week is linked to a 10% to 20% lower risk of death from all causes and, in particular, death from cardiovascular disease, diabetes, and cancer, found a pooled data analysis of the evidence. But the analysis, in the *British Journal of Sports Medicine*, pointed to a J shaped curve for most outcomes, with no conclusive evidence that more than an hour a week reduced the risk further.

Regulations needed on baby food products

An average of nine promotional claims can be found on the packaging of individual UK baby foods, found research in the *Archives of Disease in Childhood*. Such claims are largely unregulated and often imply some indirect health benefit, known as the "healthy halo effect," said the researchers. Policy makers should "update guidelines, legislation, and policies so infant feeding recommendations are not undermined," they said.

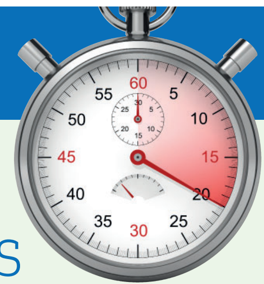
Cite this as: *BMJ* 2022;376:o527

SURGERY

More than **8** million operations a year will be cancelled or delayed in the UK by 2040 unless anaesthetic workforce shortages are tackled. By then the shortfall of anaesthetists could reach **11000**, up from the current **1400**

[Royal College of Anaesthetists]

SIXTY SECONDS ON... POTTERING



ARE WE TALKING ABOUT CERAMICS?

Not as such, unless you mean those bits of crock that you put in the bottom of plant pots to encourage drainage.

AH, SO THIS IS ABOUT GARDENING?

And other activities that mean you're not just sitting about all day. Simple activities like cooking, washing up, getting dressed, showering, and pottering about in the garden all help to reduce the risk of heart disease in older women, a US study of 5416 women whose average age was 79 has found.

SO, I CAN'T JUST SIT AT THE WHEEL?

No, it seems to be the moving about that's important, although this can be gentle. Doing household chores, preparing meals, and deadheading the roses all count. Lead author Steve Nguyen, from the Herbert Wertheim School of Public Health, San Diego, said, "Spending more time in daily life movement, which includes a wide range of activities we all do while on our feet and out of our chairs, resulted in a lower risk of cardiovascular disease."

WHAT CAN I URN FROM ALL THIS MOVING ABOUT?

Compared with women who did less than two hours of daily life movement, those who did at least four hours of such activities a day had a 43% lower risk of cardiovascular disease (hazard ratio 0.57 (95% confidence interval 0.45 to 0.74)), 43% lower risk of coronary heart disease (0.57 (0.38 to 0.84)), 30% lower risk of stroke (0.70 (0.47 to 1.03)), and a 62% lower risk of dying from cardiovascular disease (0.38 (0.26 to 0.56)), the study published in the *Journal of the American Heart Association* found.

COME INTO THE GARDEN, MAUD?

Absolutely. Heavy gardening was the best activity to do in terms of earning daily life movement points. Using the computer scored the most negative points. Maud's male friends might also benefit, although the researchers noted that another study would be needed to see if these activities had the same effects on men. But they suggested that general activity should be encouraged in all older people.

Zosia Kmietowicz, *The BMJ*

Cite this as: *BMJ* 2022;376:o497

UK needs tougher population interventions to reduce health inequities, says charity

Ministers need to make it easier for people to adopt healthy behaviours, through access to green spaces and safe streets Health Foundation

The government needs to get tougher on public health and put more focus on interventions at the population level, including curbs on commercial activity that encourages unhealthy behaviour, says a report from the charity the Health Foundation.

Government policies to improve health, increase healthy life expectancy, and tackle health inequalities in England have focused on providing information and services aimed at changing individuals' behaviour, but there are "stark warning signs" that this approach isn't enough, the foundation's report said.

Childhood obesity, alcohol related hospital admissions and deaths, and rates of harmful drinking have all risen, it said. Smoking remains stubbornly high in deprived areas, and physical activity declined during the covid pandemic.

Population level interventions, such as a minimum price on a unit of alcohol, regulations to restrict marketing and advertising, and taxes aimed at encouraging reformulation of unhealthy products, are needed because these are effective and equitable ways to

Clinicians oppose plan to end home based medical abortions

Medical organisations and campaigning groups have expressed dismay at the government's decision to end temporary arrangements in England that have allowed early medical abortion at home.

Maggie Throup, the vaccines and public health minister, confirmed on 24 February that the government was extending, by six months, the temporary arrangements for provision of early medical abortion that were put in place in 2020 but that they would end in August. On the same day the Welsh government announced it would make the service permanent.

Covid measure

The arrangement was introduced in March 2020 to reduce the risk of transmission of SARS-CoV-2. It allowed women to take both pills for early medical abortion up to 10 weeks' gestation at home as long as they had had a telephone or e-consultation with a clinician. Before the pandemic women had to attend a clinic to take the first pill.

The government said most of the more than 18 000 responses to a public consultation were in favour of ending the arrangements. A study published in *BMJ Open* in February this year found that 83% of patients (1035 of 1243) who were followed up after using the telemedicine service preferred that pathway. Two thirds (824) indicated that they would choose telemedicine again if covid were no longer an issue.

In her statement Throup said, "After careful consideration, the government's view is that the provision of early medical abortion should return to pre-covid arrangements. The wellbeing and safety of women requiring access to abortion services has been, and will continue to be, our first and foremost priority."

The government view is that provision of early medical abortion should return to pre-covid arrangements Maggie Throup (below)

However, she said the measure would be kept under review.

Earlier this week a joint letter sent to the government with 33 signatories, including the BMA, Royal College of Obstetricians and Gynaecologists, and Royal College of General Practitioners, raised concerns about the changes and called on the government to "continue this safe, effective service, and to offer women choice about their healthcare, in line with best clinical practice." It said studies had shown that the service was safe, effective, accessible, and often preferred by women.

The largest study of telemedical abortion in the world, of more than 50 000 early medical abortions in England, Scotland, and Wales between January and June 2020, found that the service reduced waiting times for abortion treatment from 10.7 days to 6.5 days, that 98.8% of women were able to end their pregnancies without any further intervention, and less than 0.05% experienced a serious complication.

Reaction

Reacting to the news that the covid arrangements would be reversed, Edward Morris, president of the RCOG, said, "The decision not to make the telemedicine service for early medical abortion permanent is disappointing and creates uncertainty around what will happen in six months' time.

"Until now the government has [been] committed to following the science, and we do not understand why a safe, effective service with strong evidence to back this up should be threatened."

Adrian O'Dowd, London

Cite this as: *BMJ* 2022;376:o501

tackle the major risk factors for ill health, the report said.

Government policy must reduce the private sector's influence in shaping environments and individual behaviour, with clearer limits on commercial activity that harms health, said the Health Foundation. Lessons could be learnt from efforts to try to protect net zero climate policies from corporate influence, it added, with similar regulations, frameworks, and criminal laws to prevent companies that make unhealthy products misleading the public and interfering in public health policy making.

Policies that target smoking, poor diet, harmful alcohol use, and physical inactivity must be underpinned by wider action to reduce poverty and poor housing and make it easier for people to adopt healthy behaviours, through education and early years support, access to green spaces and safe streets, and better access to healthy food, the foundation said.

Direct action on specific risk factors should be part of a wider cross government strategy, with all departments required to consider the health implications of their decisions and to identify opportunities to improve health.

Grace Everest, a policy fellow at the foundation, said, "The upcoming health disparities white paper is the key moment in this parliament for government to grasp the nettle and present a more coherent, long term strategy to tackle poor diet, smoking, and other leading health risk factors."

Ingrid Torjesen, *The BMJ*

Cite this as: *BMJ* 2022;376:o530

Plan for non-surgical cosmetic practitioners to need licence

The government has signalled its intention to introduce a licensing regime for non-surgical cosmetic procedures to offer greater protection to the public.

An amendment to the Health and Care Bill tabled on Tuesday would give the health secretary the power to introduce a licensing regime for botulinum toxin and fillers, the scope and details of which will be determined by a public consultation. The government said the move was designed to ensure consistent standards and protect people from badly performed procedures.

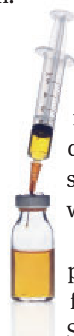
Safety standards

To be licensed, practitioners will have to meet consistent safety standards and ensure the hygiene and safety standards of their premises, the government said.

Recent legislation made it illegal to administer such cosmetic treatments to under 18 year olds and banned advertising, in all forms, of cosmetic procedures that target under 18s.

Ministers are also working with the MHRA to examine how the regulator might bring certain devices such as dermal fillers without a medical purpose within the scope of medical device regulations.

Vivien Lees, a consultant plastic surgeon and a member of the council of the Royal College of Surgeons of England, said, "This is a step in the right direction. It is also good that there will be hygiene and safety standards for the premises where these procedures take place.



"However, nine years after the Keogh review, it is disappointing that recommendations to improve the safety of cosmetic surgery have not been fully implemented. Any doctor on the medical register can still undertake cosmetic procedures, whatever their training.

"We encourage all surgeons practising cosmetic surgery to apply for the Intercollegiate Cosmetic Surgery Certification Scheme. However, the scheme is self-funded and voluntary. We have repeatedly asked the government to give the GMC the power to require those undertaking cosmetic surgery to be certified and to include this on the medical register."

Gareth Iacobucci, *The BMJ*

Cite this as: *BMJ* 2022;376:o539

Sanofi and GSK seek protein based covid vaccine authorisation

Sanofi and GlaxoSmithKline's covid vaccine has 57.9% (95% confidence interval 26.5% to 76.7%) efficacy against any symptomatic disease, the companies have reported.

In a phase 3 trial in which more than 10 000 adults were randomised to receive two doses of the vaccine or placebo, 21 days apart, researchers found it to have 100% efficacy against severe disease and hospital admission (zero versus 10 cases in the placebo group after one dose, and zero versus four after two doses) and 75% efficacy against moderate or severe disease (three versus 11 cases).

So far, details of the trial have been released only by press release, although the companies said full study results will be published later this year.

VACCINES LIKE THIS CANDIDATE OFFER A NEW ERA IN THE GLOBAL COVID-19 VACCINATION EFFORT
Melanie Saville

Thomas Triomphe, executive vice president of Sanofi vaccines, said, "No other global phase 3 efficacy study has been undertaken during this period with so many variants of concern, including omicron, and these efficacy data are similar to the recent clinical data from authorised vaccines."

The protein based vaccine can be kept at refrigerator temperatures, making it easier to store and transport than some other vaccines, such as the mRNA vaccines, which require storage at −20°C or lower.

Well tolerated

Melanie Saville, executive director of vaccine research and development at the Coalition for Epidemic Preparedness Innovations (CEPI), told *The BMJ*, "Protein based vaccines like GSK-Sanofi's updated candidate offer a new era in the global covid-19 vaccination effort . . . Protein based candidates may generate different immunological profiles from other covid-19 vaccine approaches, which may have a favourable profile in certain demographics, like the elderly or young populations. These vaccines are generally well tolerated."

In a separate trial the vaccine was tested as a booster dose for people who had previously had two doses of an mRNA (such as Pfizer and Moderna) or adenovirus vaccine (such as Oxford-AstraZeneca). The booster dose was found to increase neutralising antibodies 18-fold to 30-fold across different vaccine platforms and age groups. Across both studies the vaccine was well tolerated in younger and older adults, with no safety concerns, the press release said.

The companies are now in discussions with regulatory authorities in the US and Europe, and they plan to submit the vaccine for regulatory authorisation shortly.

Elisabeth Mahase, *The BMJ* Cite this as: *BMJ* 2022;376:o526

EARLY DATA also indicated 77% efficacy against any symptomatic disease associated with the delta variant

NEWS ANALYSIS

Is the government too hasty in removing pandemic systems?

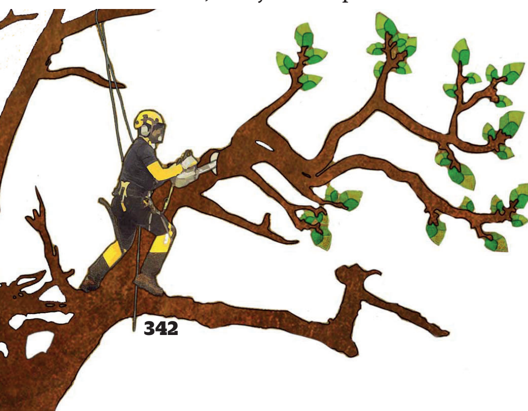
The national plan for "living with covid" has sparked concern that important services established in reaction to covid-19 are being dispensed with too quickly. **Matthew Limb** reports

A last minute row over funding for free covid testing between the Treasury and the Department of Health and Social Care for England nearly derailed the government's "living with covid" strategy launch last week. But the Cabinet eventually signed off drastic cuts to the estimated £15.7bn testing budget as a key plank of the prime minister's plan to scrap all remaining covid regulations in England.

Duncan Robertson, a policy and strategy analytics academic at Loughborough University, told *The BMJ* that the latest row showed the "false equivalence of the virus versus the economy" was still rearing its head almost two years into the pandemic, even though it is known that "once people are infected, they can't go to work, and the economy suffers."

It remains to be seen whether the short term gains to the exchequer from letting the public shoulder more responsibility for fighting SARS-CoV-2 will pay off, with long term benefits to health and society as a whole.

"I can understand Mr Johnson wants covid-19 to go away, but that doesn't mean that it will," Martin McKee, professor of European public health at the London School of Hygiene and Tropical Medicine and a member of the Independent SAGE group of experts, told *The BMJ*. "In the absence of published evidence to justify these moves, many will suspect these decisions are more about pressure from his backbenchers than science. And that will just undermine trust even further," he warned.



Removing free testing

A particular concern is that the government's removal of free testing—both PCR testing and lateral flow devices—and the stopping of payments to support people in isolation will compromise population health surveillance and people's ability to limit any future spread of infection.

Chaand Nagpaul, the BMA's chair of council, said, "On the one hand, the government says it will keep monitoring the spread of the virus and asks individuals to take greater responsibility for their own decisions, but by removing free testing for the vast majority of the population, on the other, ministers are taking away the central tool to allow both of these to happen."

Members of Independent SAGE have also criticised the decision. Although the group was at first sceptical about the utility of lateral flow tests in the absence of more support for isolation, they said the widespread availability of the tests, alongside PCR tests, may have contributed to the reduced peaks of infections last summer and this winter.

Christina Pagel, a member of Independent SAGE and director of University College London's clinical operational research unit, has argued that responsible behaviour on the part of the public relies on everyone being able to see there's a potential problem.

"As testing, surveillance, and reporting of infection rates are scaled back, this will be much more difficult and it will be much less likely enough people will change their behaviour at the same time to dampen down future waves," she wrote in the *Guardian*.

The latest row shows the false equivalence of the virus versus the economy
Duncan Robertson

The Institute of Biomedical Science has warned that the government's approach could lead to "false public confidence and then an upswing in the infection rate." Boris Johnson has acknowledged that variants of covid worse than omicron could emerge but said surges would be spotted and testing ramped up when required.

"The capability to resume testing at scale, and the associated workforce support, must be part of the government's contingency plan," the Institute of Biomedical Science said.

Exacerbating health inequality

There are also fears that "living with covid" will disproportionately affect many of society's most disadvantaged and vulnerable people, and people in public facing jobs.

Jim McManus, president of the Association of Directors of Public Health, told BBC Radio 4's *Today* programme on 21 February, "If you can't afford to self isolate, is it acceptable for you to take an infection into the workplace which isn't trivial and which could kill some people? That really is a problem we have to face together as a society."

Nagpaul warned that ending free testing would exacerbate health inequalities by creating a "two tier system, where those who can afford to pay for testing—and indeed to self-isolate—will do so, while others will be forced to gamble on the health of themselves and others."

Andrew Goddard, the Royal College of Physicians' president, told *The BMJ* that he supported a "rationalisation" of the testing programme and was in favour of a "pragmatic" approach. "I would really value some cost-benefit analysis for different groups of the public before being able to say who we should say yes or no to," he said.

The government has said the most

PAUL ELLIS/AFP/GETTY

elderly and vulnerable people and social care staff will still be eligible for free tests. But as at 25 February full eligibility details had yet to be released, leading to urgent calls for healthcare workers to be included.

"People visit hospitals and surgeries to get better and not to be exposed to deadly viruses, and the continuation of testing for healthcare workers is invaluable in protecting both staff and patients," Nagpaul said.

Contact tracing

The government's strategy proposes an end to routine contact tracing but it said local health teams can continue to use contact tracing during local outbreaks.

In a statement the Association of Directors of Public Health said it supported local contact tracing but warned, "Unless additional resources are available, capacity to do any contract tracing at a local authority level will be extremely limited and in many areas non-existent."

Robertson said he was particularly keen to see the Office for National Statistics' covid infection survey retained, amid reports that the government was considering axing it. Although the government has now accepted the case for keeping the survey to allow tracking of the virus in "granular detail," it is unclear whether it will continue on the same scale.

Robertson said the exact way in which data were captured was important, as there were differences between seeing "what's happening in Leicester compared with Leicestershire," for example. "We have seen that cities have had different epidemic trajectories from rural areas, so it is important that we can see these different dynamics develop," he said. "Similarly, the epidemic spreads in different age groups at different times; this too is important information that we do not want to lose if the survey is scaled back."

With the removal of mass testing, sequenced samples may be biased towards older people and to hospital patients. "Community sampling of variants is important as an early warning and so that the now limited resources for response can be used appropriately," Robertson added.

Infection control

In response to the government's plan, the healthcare sector has called for clarity on the issue of infection control in healthcare settings. NHS England responded on 23 February in a letter to healthcare leaders, "There are no immediate changes to IPC [infection prevention and control] requirements. This includes the requirement for staff, patients, and visitors to wear a mask or face covering in healthcare settings."

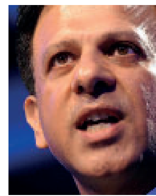
There was also confirmation that PPE will be free in all England's health and care settings throughout 2022-23.

Extra NHS capacity

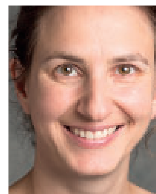
As England learns to live with covid, there are also questions about what will happen to the Nightingale surge wards built this winter to boost capacity.

"It is clear we need more bed capacity in the NHS, and we are going to really struggle over the next five years without it," said Goddard. "It doesn't necessarily need to be in acute hospitals. We need to start thinking about increasing community hospital bed capacity. People are talking about trying surge capacity as virtual wards. I think that's the likely model rather than carrying on with Nightingales in car parks." But he warned, "The biggest limit is not the physical space, it's the staffing."

The wait continues for ministers to develop and agree a fully costed workforce strategy that will deliver the staff that experts say the NHS needs.

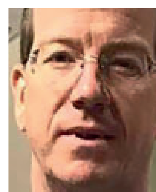


People visit hospitals to get better and not to be exposed to deadly viruses. Testing for healthcare workers is invaluable Chaand Nagpaul



It will be much less likely that enough people will change their behaviour at the same time to dampen down future waves Christina Pagel

If you can't afford to self-isolate, is it acceptable for you to take an infection into the workplace which could kill some people? Jim McManus



I would really value some cost-benefit analysis for different groups before being able to say who we should say yes or no to Andrew Goddard

Selling off assets

Away from frontline care, there are also major concerns about the decision to sell the UK's Vaccine Manufacturing and Innovation Centre to industry.

In the accompanying editorial (p 344), Rebecca Glover, of the London School of Hygiene and Tropical Medicine's antimicrobial resistance centre, and colleagues argue that although more than £200m was spent on the centre, to help get promising vaccines into production and provide a defence against future pandemics, this investment was justified in 2020 when it helped scientists develop the Oxford University/AstraZeneca vaccine.

Glover and colleagues say the decision to sell is "difficult to justify on strategic, public health, economic, or reputational grounds."

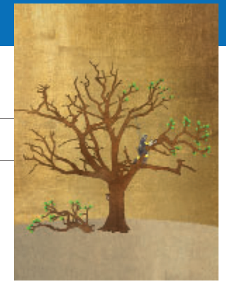
Matthew Limb, London

Cite this as: *BMJ* 2022;376:o515

Many will suspect these decisions are more about pressure from backbenchers than science Martin McKee

EDITORIAL

Sale of UK's VMIC



Government's decision on vital vaccine infrastructure is baffling and should be reversed

Amid a surge of infections from the omicron coronavirus variant, revelations about high profile breaches of pandemic restrictions, and deepening tensions between Ukraine and Russia, a puzzling announcement has escaped the attention of many commentators—the UK government has put its Vaccine Manufacturing and Innovation Centre (VMIC) up for sale.

Launched in 2018 and only just completed, the centre is the jewel in the crown of the UK's covid-19 vaccine response.[1 2] The UK taxpayer spent over £200m on the centre, a joint venture between the University of Oxford, the London School of Hygiene and Tropical Medicine, Imperial College London, and industry partners.[3] The non-profit facility was meant to help UK researchers and small and medium enterprises move promising vaccines to production and provide a bulwark against future pandemics, vaccine shortages, and price wars.[4]

The decision to sell seems difficult to justify on strategic, public health, economic, or reputational grounds

Rebecca E Glover, assistant professor, London School of Hygiene and Tropical Medicine rebecca.glover@lshtm.ac.uk

Adam P Roberts, reader in antimicrobial chemotherapy and resistance, Liverpool School of Tropical Medicine

Andrew C Singer, principal scientist, UK Centre for Ecology and Hydrology, Wallingford

Claas Kirchhelle, assistant professor, University College Dublin

Covid-19 vaccine

The wisdom of this investment became obvious in April 2020, when funding for the VMIC and other public initiatives was ramped up, and construction of a 74 000 m^2 facility began as scientists raced to develop the Oxford-AstraZeneca covid-19 vaccine.[5] As recently as March 2021, the government described the VMIC as a "highly specialist facility" that can "respond to pandemics by producing millions of doses quickly."[3]

So why is this key UK vaccine infrastructure being sold off?

According to the government, industry has effectively taken over production of covid-19 vaccines, and "the need for VMIC's surge capacity has passed."[1] Meanwhile, selling off the VMIC will generate treasury revenue at a time of fiscal pressure.

However, is this really making the best use of public money? Or is it another case of what the former head of the UK Vaccine Task Force, Kate Bingham, recently described as the government's neglect of biological threats and lack of strategic scientific expertise in decision making?

Expecting industry to make the necessary long term investments is naive. The history of vaccination includes numerous examples where a mix of short term industrial priorities and lack of long term political planning compromised the ability of research, development, and manufacturing hubs to attract private and public investment, retain skilled workers, and respond to emerging and re-emerging disease threats.[7] The UK experienced a substantial loss of vaccine capabilities during the 1980s and 1990s, for example, after leading players such as the Wellcome Foundation and Glaxo pulled out of or relocated centres of vaccine expertise to other countries.[8]

The VMIC, which was conceived before the pandemic, was a sign of renewed political ambition and confidence in the UK's vaccine infrastructure. Situated at the intersection of public and private research and providing a vital bridging function for both, the centre offers a cost effective way to retain and adapt staff and skills to meet current and future threats.

RICHARD POHL/WPA/GETTY IMAGES

Worryingly, statements by the Department of Business, Energy and Industrial Strategy (BEIS), which oversaw the substantial public investment in the VMIC, indicate that the UK government is distancing itself from the centre and its sale, with little explanation or transparency.[1 10] Meanwhile, bidders—which include Oxford Biomedica, Fuji Film, and the Lonza Group—are relative unknowns in vaccine development. The loss of the VMIC at this time is arguably akin to defunding fire brigades after extinguishing a major blaze.

Decision makes little sense

Economically, selling the VMIC without parallel improvements to strengthen the upstream innovation that led to much of the UK's early covid-19 vaccination successes makes little sense. Revenues from the sale of VMIC will have little or no effect on the biggest rise in national debt since the second world war.

Reputationally and strategically, the damage may be even worse. Selling the VMIC signals a lack of government commitment that will deter investors who may wish to build British biomedical capacity—an important goal of post-Brexit strategic planning.[1 11]

Since the decision to sell off the VMIC during a pandemic seems difficult to justify on strategic, public health, economic, or reputational grounds, it would be foolhardy to proceed with it. The government is entertaining offers for the VMIC, but it has not yet accepted any, to our knowledge. Until it is sold, there remains an opportunity for the UK public and its elected members of parliament to convince those in charge to protect what could well become a cornerstone of British pandemic preparedness and bioindustrial infrastructure.

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EDITORIAL

Test results and transgender care

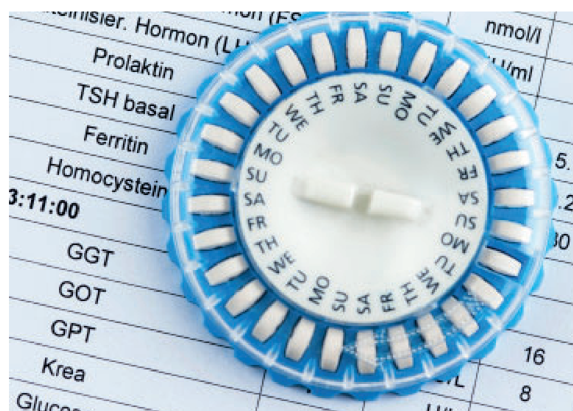
Both male and female ranges should be given on all relevant test results

The correct interpretation of laboratory test results is an integral part of daily clinical care. Many clinicians scan for "red flags" without always examining reference ranges closely. However, reporting of reference ranges, particularly sex specific ranges, can lead to substantial distress and potentially incorrect care for people who are transgender, which includes people with a binary (man or woman) or non-binary gender identity.[1]

For many trans people, gender affirming hormone therapy reduces gender dysphoria and improves quality of life.[2-5] Physiological effects also occur. Masculinising testosterone therapy increases red cell production, suppresses menstruation, increases muscle mass, and reduces fat mass.[6 7] Feminising hormone therapy, typically with oestradiol and anti-androgen therapy, reduces red cell production and muscle mass and increases fat mass.[6 8] Changes begin within three months and substantially affect the interpretation of laboratory tests with sex specific reference ranges such as those for oestradiol, testosterone, haemoglobin, and creatinine.[1]

As with many aspects of trans health, research on the precise effects of gender affirming hormone therapy on laboratory test results is limited. Although the direction of haemoglobin and creatinine concentrations changes consistently with hormone therapy, the pace of change is less clear. Few studies have assessed the effect of hormone therapy on levels of iron, prostate specific antigen, or cardiac troponin (which is influenced by heart size).[1]

We previously proposed that since changes in sex steroid concentrations and body composition occur within three months of starting hormone therapy, the reference range of the person's affirmed gender (male or female) should be used to interpret tests with sex specific reference ranges.[1] The exception is for test results influenced by organ size or the presence of organs, for which the reference range for the presumed sex at birth should be used (cardiac troponin, human chorionic gonadotrophin for people with a uterus, and prostate specific antigen for people with a prostate). This, however, excludes people in the first few months of treatment or taking a low dose of hormone therapy, as is common in people with non-binary identities.[9]



CRISTINA PEDRAZZINI/SPL/ALAMY

Research on the precise effects of gender affirming hormone therapy on laboratory test results is limited

Ada S Cheung, associate professor, University of Melbourne adac@unimelb.edu.au
Teddy Cook, acting director, community health and wellbeing, ACON, New South Wales
Ariel Ginger, researcher
Sav Zwickl, researcher, University of Melbourne

Gender affirming approach

A working group convened by the World Professional Association for Transgender Health recommended in 2013 that electronic medical records and laboratory information systems include data on each patient's presumed sex at birth, actual gender, name and legal name, and specific organs (breast, cervix, prostate), as well as a notification system to avoid misgendering by clinical staff.[10]

Routine collection of these data would not only improve clinical care for trans people but, importantly, help to inform research on gender diverse populations.[11] Costs are often cited as a barrier to implementation,[12] but negative attitudes towards trans people among healthcare staff are another barrier to change. Bias, both implicit and explicit, affects healthcare delivery, limiting access to gender affirming and basic healthcare.[13 14]

Ideally, clinicians would provide detailed clinical information to laboratories along with the test samples, and patients would receive personalised and clinically relevant test reports to aid clinical care. However, trans specific reference ranges do not exist. Additionally, requesting different reference ranges for a series of tests in the same patient is impractical, and clinicians may not know which tests can be altered by hormone therapy.

Reporting both male and female reference ranges (dual reporting) for all tests with sex specific ranges is a more pragmatic approach. This would allow clinicians and patients greater flexibility when interpreting test results, and is particularly valuable for people in the early stages of hormone therapy. Serum oestradiol concentrations are already reported differently during different phases of the menstrual cycle, as are thyroid function tests during pregnancy.

Although difficult for laboratory information systems and electronic medical records, dual reporting of reference ranges should be the norm for all tests with sex specific ranges regardless of people's gender experience (cis or trans) or body. This approach challenges the cisgenderism of current test reporting systems and removes the need for clinicians to state the sex of patients on requests.

Dual reporting of reference ranges for all tests with sex specific results will help to ensure the highest standards of care for vulnerable population groups and an increasingly diverse patient population.

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THE BIG PICTURE

Ukrainians rally to give blood after Russia invades

Queues form at a blood donation site in the western Ukrainian city of Lviv (main image), as people across the country, including the capital Kyiv (inset), respond to President Volodymyr Zelenskyy's plea for donors, two days after the Russian invasion of the country.

The World Health Organization, which has released $3.5m (£2.6m) to supply urgent medical supplies to the country, has warned that any further escalation of the conflict could "result in a humanitarian catastrophe in Europe." On 1 March the UN reported at least 136 civilian deaths, including 13 children, and 400 people injured from Russian shelling and airstrikes, but this was likely to be an underestimate.

The crisis is already affecting routine medical care, with reports of hospitals being shelled and patients having to be evacuated and treated in bomb shelters.

Jacqui Wise, *The BMJ*

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YURIY DYACHYSHYN/AFP/GETTY IMAGES

Has covid changed the debate about nationalising GPs?

yes

GPs have all the disadvantages of being self-employed contractors and none of the benefits of being NHS employees

Azeem Majeed, professor of primary care and public health, Imperial College London
a.majeed@imperial.ac.uk

The intense micromanagement of general practices by NHS England since the start of the covid-19 pandemic has shattered the illusion that NHS GPs are truly "independent."

For example, during the pandemic NHS practices have often received weekly updates from NHS England on how they should provide primary care services. The opening hours and working arrangements of general practices are also highly regulated by NHS England. And GPs are not independent contractors in a way that professionals working in other fields, or indeed primary care physicians working overseas, would recognise.

GPs are not even able to offer private medical services to their patients in the same way as NHS trusts or dentists. In effect, they have all of the disadvantages of being self-employed contractors and none of the benefits of being NHS employees.

A decade of underinvestment

For more than a decade, primary care in England has suffered from underinvestment and a lack of key staff such as GPs and practice nurses. By contrast, the NHS hospital sector, although not without its own problems, has seen its funding and medical staffing increase at a much quicker rate than NHS primary care. But more NHS work continues to be shifted to primary care without being followed by a commensurate increase in funding and staffing. Attempts by NHS England to prevent this, such as introducing the NHS hospital contract, have failed.

Clearly, NHS England is not going to invest adequately in the current independent contractor model of general practice, so being a GP partner is increasingly unattractive for younger GPs. It's therefore time to look seriously at the alternative—GPs becoming salaried employees of the NHS.

Of course, being employed by the NHS is not a panacea. Many NHS staff employed by NHS trusts suffer from stress and overwork, just like those working in primary care. But they're not personally responsible for the ownership of their employing organisations, and their income doesn't depend on how well their organisation performs financially. Their working hours are also better regulated than those of self-employed GPs.

Creating career opportunities

If GPs had employment contracts similar to those of NHS consultants, they could then have job plans with time allocated for activities such as quality improvement, NHS management, teaching, training, and research. Currently, these activities are often done on top of their regular working hours. Working in organisations that employ large numbers of GPs would also create opportunities for a better career structure. For example, it may be possible to create posts for GPs who specialise in areas such as the care of elderly people or child health, as well as for GPs who take on clinical leadership, quality improvement, and NHS management roles in addition to a clinical role.

Finally, GPs becoming NHS employees would make NHS England directly responsible for delivery of primary care services, just as it already is for specialist services. And it would be the responsibility of NHS England—not GPs—to ensure that patients had timely access to a comprehensive range of high quality primary care services and the infrastructure needed to deliver this care.

An increasing proportion of NHS GPs are already salaried, so the future for general practices looks to be heading in this direction. The question for GPs is: do they want to be employed by the NHS with similar terms of employment to consultants, or do they want to be employed by private companies and "mega-partnerships," with the inevitable variability in terms of the employment they will offer?

The pandemic has led England's health secretary into a debate on whether family doctors should be directly employed by the NHS. **Azeem Majeed** argues that this is an opportunity to correct a flawed model, but **Simon Hodes** says that partnerships are still the best model for primary care

no

Partnerships offer accountability, responsibility, and exceptional value for money at around £3 per week per patient, paid to the practice

Simon Hodes GP partner, Bridgewater Surgeries, Watford simon.hodes@nhs.net

Since the NHS was founded in 1948, GP partners have been classed as self-employed practitioners. To this day, GP partnerships function as small to medium sized businesses contracted by NHS commissioners to provide care in a geographical or population area. Although England's health secretary, Sajid Javid, recently mooted "nationalising" general practice, that same week the BMA announced plans for a "new deal" based on the independent model.

Each general practice can organise itself to provide services to the NHS in the most efficient and flexible way possible in its local area. Partnerships offer accountability, responsibility, and exceptional value for money. This has been highlighted during the pandemic, as GPs have responded rapidly at a local level to help protect their communities. GPs remain at the heart of health promotion and prevention strategies, tackling health inequalities and providing mass vaccination—all key determinants of health. All of this for around £3 per week per patient, paid to the practice.

In recent years, policy has pushed England's general practices into "primary care networks" serving 30 000-50 000 patients, under a clinical director—potentially reducing the need for so many partners in constituent practices. Large group general practices (or "super practices") are run by small numbers of managing partners or by private companies. There has been much disquiet about US companies buying up chains of practices.

Continuity of care is best provided by stable GP teams, which are traditionally led by partnerships. Continuity has a strong evidence base for reduced morbidity and mortality, improved patient satisfaction, reduced referrals, safer prescribing, and lower admission rates. It also leads to improved efficiency, as well as higher satisfaction for patients and professionals.

Changing landscapes

Although the majority of GPs remain as partners, it's true that the percentage is falling. Over the past 20 years we've seen a major shift away from newly qualified GPs seeking lifelong partnerships, to a generation of GPs seeking salaried, locum, or portfolio work. There are many reasons for this, including concerns about uncapped hours and responsibility, building liabilities, and a narrowing gap in earnings between partners and non-partners. Historically, an income was attracted for each partner to each practice, but this was scrapped under contract changes, and many would argue that it triggered the demise of partnerships as we know them.

GP teams are working ever harder—expanding in size and workforce, with increasing reliance on allied professionals, any of whom could potentially become partners—to support a dwindling workforce while caring for an ageing, growing population living for longer with more complex health needs and long term conditions. GPs remain the ultimate generalist specialists, and perhaps this needs to be recognised in consultant status. And while the number of GPs is falling, the number of patients per GP is rising rapidly.

The government's 2019 *GP Partnership Review* concluded, "We need a clear vision for the future and the role that general practice and partnerships will play." The NHS Confederation commented that "our members report support for the current model in terms of its basis in serving local populations of registered patients which facilitates continuity of care." GP teams deal with around 90% of all patient contacts—for less than 10% of the overall NHS budget. As the NHS *Five Year Forward View* says, "If general practice fails, the NHS fails."

It's understandable that a new generation of GPs don't relish the responsibility, workload, and financial commitment required in owning and running a practice, including estate planning and staffing. But ultimately, the autonomy this brings and the ability to plan your own destiny, prepare your working environment, and shape your workforce and strategy is what attracts many GPs to partnership and continues to provide so much longlasting job satisfaction.

Policy makers cannot sleepwalk into a GP crisis any longer, and they must invest in the best model of care delivery. For now, that is almost certainly still best provided through an updated independent partnership model.

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THE BMJ INTERVIEW

UK testing was "a shambles" so why hasn't the government learnt from its mistakes, asks Paul Nurse

The winner of the 2001 Nobel Prize in Physiology or Medicine tells **Mun-Keat Looi** of his experience with testing during the pandemic and the effect of covid-19 on UK research

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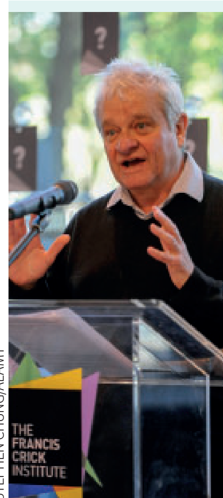
Paul Nurse is no expert, he says. The geneticist and former president of the Royal Society is humble about the limits of his knowledge when it comes to covid-19, and yet on the hot topic of testing he does not hesitate to use his prominent voice.

"Under Matt Hancock [former health secretary], it was a shambles, frankly, given the strength and quality of UK biomedical science," he says of the test and trace system. "They immediately turned only to private company solutions without recognising that that had to be set up from scratch when it was needed almost immediately. It is possible, but not something you can put together in weeks. I think they made a fundamental strategic error."

We wrote to Hancock. We talked about it on radio and TV. We got no replies, then after three months we got a holding note from a civil servant. It beggars belief



STEPHEN CHUNG/ALAMY

BIOGRAPHY

Paul Nurse graduated with a degree in biology from the University of Birmingham and then with a PhD from the University of East Anglia. A yeast geneticist, his research looks at the cell cycle, which led to the 2001 Nobel Prize in Physiology or Medicine for his part in discoveries of protein molecules that control the division (duplication) of cells.

He is a former chief executive of Cancer Research UK and former president of Rockefeller University in New York City. He has been the director and chief executive of the Francis Crick Institute in London for 10 years, during which time he also served for five years as president of the Royal Society. He was knighted by the Queen in 1999.

What irks Nurse is that he and other research leaders with PCR testing expertise and infrastructure at their fingertips were ignored when UK science was chomping at the bit to help fight the virus. "We have throughout the country many, many academic laboratories with both the facilities and the skilled staff to do these tests, and they were all sitting at home under furlough. [At the Francis Crick Institute, where I am director], we brought them back in and within three weeks we were doing around 10-15% of total test capacity in the country when we'd never done anything of the sort before."

Nurse appealed to Hancock to roll out what his institute was doing around the country. Within weeks, he claims, local laboratories could be providing a 24 hour turnaround testing service using pre-existing healthcare logistics. "Here could have been a contribution to the complete chaos of the first round when people weren't being tested—including healthcare professionals.

"We wrote to Hancock about it. Peter Ratcliffe, clinical physician and another Nobel laureate, wrote to him. We talked about it on the radio and television. We got no replies, then after three months we got a holding note from a civil servant. It beggars belief," he says.

At the Crick, PCRs can be turned around very rapidly, usually within 8-9 hours. "You just have to be good at logistics and be well organised, and also to have the testing facilities close to the people being tested so that it can work efficiently," says Nurse. The Crick's efforts have kept them "surprisingly active" over the past two years. Nurse is proud of how the institute's scientists have provided testing for 10 local hospitals and 150 care homes, set up within a week of the start of the pandemic.

Nurse fears that, if a similar pandemic occurs again, the government is likely to do the same thing and fall back on the private sector. And even today, it needs a contingency plan for testing. "They're not going to keep testing capacity up at half a million a day running for ever and ever. They can't afford to do it."

MARK CHILVERS/SHUTTERSTOCK

> There is a pool of virus there, it's almost certainly mutating

FACUNDO ARRIZABALAGA/EPA-EFE/SHUTTERSTOCK

Despite direct appeals from Paul Nurse (left), director of the Francis Crick Institute (far left) and Peter Ratcliffe (above), Matt Hancock turned to the private sector for PCR tests at the start of the pandemic

The government is starting to withdraw free testing for everyone, as we learn to live with the virus. Do you think the time is right for that?

I'm getting more relaxed about it, but given the massive amount of virus that's circulating around the globe and the extraordinary rapidity in modern societies of how that can spread, we have to always worry about new variants and what they might bring.

The circumstances in which [omicron] is hitting the UK now are certainly not as lethal as covid was 18 months ago, whether that's partly because of the virus or the fact that so many of us are vaccinated. We know from our own [ongoing] research, although it's not yet published, that the booster massively increases immunity. We've tested over 300 people, including myself, and [antibody levels are] massively increased compared with one dose and two doses of the vaccine.

[But] I'm not as blasé as some—there is a pool of virus there, it's almost certainly mutating, so something else could go wrong. There is a case for complacency with this. And of course the answer is worldwide vaccination, which has got to be a focus.

Might the tribulations with testing—in terms of the science, the technology, the infrastructure, our understanding, and interpretation of results —lead to benefits for research?

What has been evident and obvious is that high quality testing coupled with essentially social measures are the only defences with a new viral pathogen. It's clear that testing is a frontline defence system that will always be important and was always identified as being important. Long term planning processes in the NHS over the past 10 years were aware of it and did nothing about it. It was obvious—even to a yeast geneticist like me—that this was the case, and yet nothing happened.

What has this taught us? We should take notice of scientists, and when they say something is important, test it properly in the political domain rather than having a report like the one over flu [Exercise Cygnus in 2016] and then just burying it and forgetting about it.

We need to prepare for these sorts of things. The fact that we had no personal protective equipment was ridiculous. We were being run by accountants rather than those who know what goes on—the cost of having a warehouse that is immediately available, and you might throw stuff away after 5-10 years, but you keep it stocked up, compared with [doing nothing and] killing people. We need a major new shift in how to do this, driven not by the accountants, not by constant attention to the penny that can be saved, but [by] the lives and the economy that can be saved.

The UK has long been regarded as a world leader in research—how will the pandemic affect that in the years to come?

I don't think the research infrastructure as a whole responded brilliantly to keeping students, postdocs, and younger colleagues productive during the pandemic. Like what we did [at the Crick]—it would not have been difficult for many universities to [get involved in testing], but they didn't, probably because they're risk averse.

Even for our staff, even though we protected the workplace and kept our research activity going, our graduate students and postdocs work on projects that last for three to seven years, and they've been blighted by the pandemic. They've not interacted with people, they've not had meetings, conferences, seminars—the bread and butter of intellectual research activity has been severely truncated. And that's brought stress for these younger people, and they are unhappy. I think the system has got to support them because otherwise we will have a cohort of people who didn't have proper training, who didn't have the proper exposure to research, who couldn't make sensible decisions about what their career should be.

WILL OLIVER/EPA-EFE/SHUTTERSTOCK

We need a new life sciences strategy that embraces the entire territory of life sciences

What do you see as the biggest challenges to biomedical research over the next five years?

Firstly, there are the consequences of covid-19. The second thing is that we in the UK think we're very good at research and biomedical life sciences, which in general we are, but we should not rest on our laurels. I'm writing a review for the government [on research and development in the UK], and it isn't just a question of money and investment, it's a question of how we order it, how we structure it, how we deliver it.

If we look at the more academic side, we have about £8-9bn being spent in the UK on what I call "discovery research" at the interface between translation and commercial application, which is largely driven by universities. And we have over £4bn a year going into what are called public service research establishments, which are run by the government. These two sectors barely talk to each other. And we know there's a lot of stress in university departments about people finding money to do research and so on. This all needs to be looked at.

The term "life sciences" has come to simply mean biomedicine and the drug industry, but it is much wider than that, including applications in agriculture, protecting the environment, and other forms of biotechnology. This has been almost lost in the fact that we have a life sciences strategy that takes no notice of other categories. It's just invisible. We need a new life sciences strategy that embraces the entire territory of life sciences because the different categories have much to learn from each other when it comes to applications.

Finally, the obvious one is we need funding. You only can make a case for funding if you deserve funding. Now is the moment [given everything that science has delivered over the past two years]. So let's get out there and make the case for it. And not by calling for individual sectors, which is where we tend to go tribal. We need to make a concerted effort to communicate that science as a whole—understanding of the world and ourselves—leads to improvement of humankind and increasing prosperity and protection of the environment.

Has science become more politicised and polarised?

I think communication is critical between scientists, political leaders, policy makers, and the public. And I'm not sure we're brilliant at it. We need to consider very carefully the relationship between scientific discovery, research, public policy, and communication with the public because we've seen politicians having to adapt to science in a way that they've never had to before. And they think that one liners like "We are following the science" are appropriate. But that just shows they don't really know what science is, because there are going to be a range of opinions. What is the evidence base? What is the reasonable thing to follow?

My view is that people have mostly done their best, including the politicians. I give them a hard time, but I think they've all had a hard time, and I think we have to recognise that they're not going to get everything right, just as scientists wouldn't. But now we need to reassess. We need a healthy relationship between science and the public, and for decision making to be built on it. How can we present science in a way that engages the public, leads to proper outcomes, and doesn't lead to these one liners, which simply distort the whole process?

Mun-Keat Looi, international features editor, *The BMJ*
mlooi@bmj.com

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