this week

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LYNSEY ADDARIO/GETTY IMAGES

Recovery plan has to be realistic, say critics

The King's Fund and others say tackling the elective backlog has to take into account the pandemic's effect on staff

An apparent row over targets is further delaying publication of the elective care recovery plan, amid calls for the government to be realistic, given the scale of the backlog and the high incidence of omicron infections.

Almost six million people in England are on a hospital waiting list, of whom 312 665 have been waiting more than a year. The plan was due to be published in December but was initially delayed when the omicron wave struck and threatened to overwhelm the NHS.

The *Guardian* reported that the Treasury is said to be frustrated with NHS England and believes it is "foot dragging" over targets. A source told the newspaper the Treasury was keen to set tough targets, while NHS England was calling for them to more realistic.

Richard Murray, chief executive of the King's Fund, told *The BMJ*, "There is always a push from the Treasury to make sure they are getting value for money. The risk is when it goes too far and the NHS gets pushed into signing up for targets that they are not going to be able to meet."

The National Audit Office has warned the waiting list for elective care in England could reach 12 million by 2025 without extra staff and bed capacity, while MPs on the Health and Social Care Committee said reducing the backlog depended on tackling the staff crisis.

"Without tackling the workforce issue, trying to impose targets on the NHS risks being magical thinking," Murray said.

Although absence rates have improved slightly, the NHS still had more than 77 000 staff absent because of sickness each day in the week to 16 January, 20 000 more than at the start of December. Neil Mortensen, president of the Royal College of Surgeons of England, said, "There are still huge pressures on capacity, which make it hard to increase levels of planned surgery. We need to use the investment that's been promised to establish surgical hubs in every part of the country."

He added, "We need a realistic plan that ensures those in the most urgent need are seen first but also doesn't leave those with chronic problems waiting indefinitely. Even if the answer is that it will take five years, we need to agree a longer term ambition to restore the waiting time standard of 18 weeks."

A Department of Health and Social Care spokesperson said the government was committed to ensuring people get the treatment they need, with an extra £5.9bn to tackle the backlogs. "The elective recovery plan is an important part of our recovery, and we will set out details in due course."

Jacqui Wise, Kent

Cite this as: *BMJ* 2022;376:o208

LATEST ONLINE

- Recovery trial lead launches organisation to cut costs of clinical trials
- Europe could be heading for pandemic "endgame," says WHO region chief
- Coronavac immunity is strongest after boosting with a different vaccine

SEVEN DAYS IN

BMA representative wins legal dispute over attempts to silence him

Glynn Evans (left), a former chair of the BMA's armed forces committee and an army reservist, has secured a legal victory obliging the Ministry of Defence to revise its policy on service personnel speaking to the media without prior consent.

In 2018 he was quoted in the *Times* describing computer failures in military surgeries. And in a 2018 *Mirror* story about an Afghanistan veteran who killed himself, Evans raised concerns about a shortage of military mental health professionals.

He was told to make no further comments and was banned from speaking at the BMA's 2019 representative meeting. He raised a service complaint about the order and over fears that his comments were being used to force his resignation. His complaint was dismissed.

With the BMA's backing, Evans asked the High Court for permission to apply for judicial review. But the ministry capitulated and agreed in a consent order that the policy "lacked clarity in relation to the position of the armed forces and trade union activities." It agreed the restriction was an unjustified interference in Evans's rights to freedom of expression and freedom of assembly and association. The decision not to uphold his complaint was also quashed, and the ministry agreed to pay him £10 000 and costs.

Clare Dyer, *The BMJ* Cite this as: *BMJ* 2022;376:o207

Covid-19

Rebound warning as restrictions ease in England

Health organisations warned that a lifting of plan B covid restrictions on 27 January would risk a rebound in the number of infections and a rise in hospital admission rates. They said the changes had not been guided by data and the NHS remained under extreme pressure. Face masks are no longer mandatory on public transport or in shops, although they are recommended in closed public spaces. Chaand Nagpaul, BMA council chair, said the decision risked creating a false sense of security when the NHS was still under crippling pressure and infection rates were nearly twice as high as when plan B was introduced.

Nightclubs return to Scotland and Wales

Scotland allowed nightclubs to reopen and social distancing rules to be dropped from 24 January. However, people are still asked to work from home, and measures such as masks on public transport and at indoor public places will remain. Wales has also announced an easing of restrictions over the next two weeks, with crowds allowed to return to sporting events and nightclubs reopening.

No proof that breast milk is infectious

Researchers at the University of California found no evidence that breast milk contained infectious SARS-CoV-2 virus that could be passed to babies through breastfeeding, having analysed breast milk from 110 women. The study, published in *Pediatric Research*, found SARS-CoV-2

genetic material (RNA) in the breast milk of seven women (6%) with a confirmed infection or self-reported symptoms, but this was not present in any of the second samples taken one to 97 days later. None of these samples was positive for subgenomic RNA, a putative marker of infectivity.

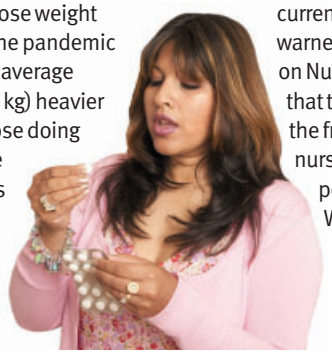
Diet

Immunotherapy helps some children with peanut allergy

Seven in 10 children aged under 4 with peanut allergy achieved desensitisation—being able to tolerate the equivalent of 16 peanuts—after two and a half years of immunotherapy, a US trial reported in the *Lancet*. However, the effect waned over time, as just a fifth of them were still able to safely consume the same 5000 mg of peanut protein powder 26 weeks after treatment ended. The trial found an age-response relation, with more of the youngest children aged 12-24 months likely to achieve remission (71%) than those aged 24-36 months (35%) and 38-48 months (19%).

Pharmacies to refer people to weight loss programmes

Community pharmacy teams can now refer adults with obesity and other conditions to the 12 week online NHS weight management programme, which was previously accessible mainly through GP referral. Adults with obesity, hypertension, or diabetes will qualify for the service, and those from minority ethnic backgrounds will be able to join the programme with a lower body mass index (BMI) of 27.5 because of an increased risk of type 2 diabetes. Research found that people seeking NHS help to lose weight during the pandemic were on average 5 lb (2.3 kg) heavier than those doing so in the previous three years.



Misinformation

Content removal "is not enough" to stop fake news

The Royal Society argued that governments and social media platforms should not rely on content removal to combat harmful scientific misinformation online. There was little evidence that removing offending content would limit the harms, it said, warning that such measures could even make it harder to tackle some areas of the internet and may exacerbate distrust in authorities. Its report recommends a range of measures such as independent fact checking, technologies to help users verify the validity of messages, and investment in lifelong information literacy.

Nursing crisis

World needs 13 million more nurses in next decade

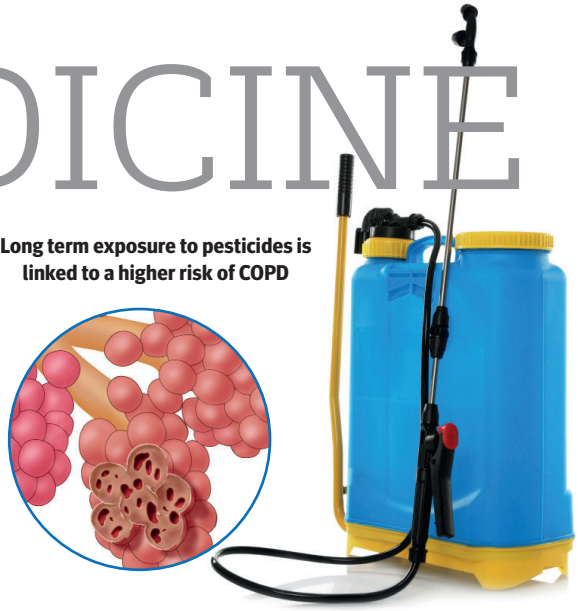
As many as 13 million more nurses will be required worldwide over the next decade, equivalent to almost half of the world's current workforce of 28 million, warned the International Centre on Nurse Migration. It said that the pandemic had made the fragile state of the global nursing workforce much worse, posing a serious risk to WHO's aim of universal health coverage.

MEDICINE

COPD

Workplace exposure to pesticides shows link

Lifetime exposure to pesticides in the workplace was linked to a raised risk of chronic obstructive pulmonary disease in a study of around 100 000 people, published in the journal *Thorax*. The findings were independent of smoking and asthma, key risk factors for COPD. The prevalence of the condition in the study was 8% (7603 cases) and was, unsurprisingly, higher among current smokers (17%) than in former smokers (9%) and never smokers (7%). The researchers called for more studies focused on evaluating the effect of specific types of pesticides to help determine preventive strategies.



Long term exposure to pesticides is linked to a higher risk of COPD

Research

Call to end redacted clinical trial data

In a letter to the International Committee of Medical Journal Editors, six health research and campaigning groups called on editors to no longer regard trial data in health technology assessment reports as "prior publication." A *BMJ Open* study previously found that over 80% of appraisals by NICE contained redacted data, a large proportion of which were due to widespread concern among researchers that disclosing the data in these reports could prevent them from later publishing the outcomes of the trial in a peer reviewed journal.

Bionic chip is inserted in patient's blind eye

A patient treated by Moorfields Eye Hospital NHS Trust in London has been able to detect signals in her blind left eye thanks to a 2 mm microchip inserted under the centre of her retina. She is the first UK patient to receive the device, which is part of a Europe-wide clinical trial. The patient uses special glasses containing a video camera that is connected to a small computer worn on a waistband. The new implant offers hope of partially restored vision for people with geographic atrophy, the most common form of dry age related macular degeneration.

Social care

Scotland funds new starter fees in social care

New employees joining Scotland's social care workforce will have their entry costs paid by the government until the end of March. The Protecting Vulnerable Groups checks, which usually cost £59, and Scottish Social Services Council registrations, which cost £25-£80, will be funded to encourage more people to join the profession. Kevin Stewart (left), social care minister, said, "I hope this support will encourage those considering joining this vital workforce to go ahead and do so."

Commissioning

New target date is set for integrated care systems

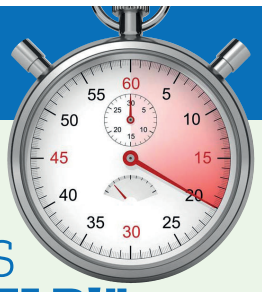
Clinical commissioning groups will remain in place until July, as the introduction date for integrated care systems has been pushed back from April to allow time for the remaining parliamentary stages of the Health and Care Bill. The first quarter of 2022-23 will be used to form the integrated care boards and recruiting leadership teams.

Cite this as: *BMJ* 2022;376:o194

LONG COVID

England's **219** NHS trusts lost an estimated **1.82** million days in absence from healthcare workers with long covid from March 2020 to September 2021

[All Party Parliamentary Group on Coronavirus]



SIXTY SECONDS ON . . . "HELP!"

I NEED SOMEBODY?

Not just anybody. The NHS has enlisted the music of the Beatles to try to encourage us to take better care of our mental health.

WE CAN WORK IT OUT

That's the hope. A new campaign—with the help of John Lennon's lyrics to the song "Help!" that described his stress in dealing with fame—is encouraging anyone experiencing mental health concerns to not just let it be.

IF I NEEDED SOMEONE?

Claire Murdoch, NHS mental health director, says that the covid pandemic has taken a toll on the nation's mental health, and a recent survey by University College London showed that feelings of depression and anxiety increased sharply over Christmas, particularly among younger people.

ALL THE LONELY PEOPLE . . .

The campaign is emphasising that professional support through NHS talking therapies is available and that people don't have to carry that weight on their own. "It's important you know you are not alone and that it is OK to get help," said Murdoch.

WITH A LITTLE HELP FROM MY FRIENDS?

Aside from the Fab Four, modern day musicians have come together to back the campaign, including Craig David, Nicola Roberts of Girls Aloud, Tom Grennan, Laura Mvula, Ella Henderson, and Max George. The campaign, which will run across radio and social media, is also backed by charities such as Mind and Age UK and by the Royal College of Psychiatrists.

IT'S GETTING BETTER ALL THE TIME

Adrian James, president of the Royal College of Psychiatrists, said, "Anyone from any background can experience anxiety and depression, and it's important that people with these symptoms come forward to seek help. This campaign is vitally important and will help even more people get the mental health support they need."

Gareth Iacobucci, *The BMJ*

Cite this as: *BMJ* 2022;376:o160

Advice on FFP3 masks should extend to GPs, BMA says

FFP3 masks should be worn by staff who care for patients with suspected or confirmed respiratory viral infections that are spread by airborne transmission, such as SARS-CoV-2, winter guidance from the UK Health Security Agency has said.

This is a change from previous guidance, which said high grade masks should be worn only in intensive care units or where certain aerosol generating procedures (AGPs) were being carried out.

The move follows the recognition of SARS-CoV-2 as a virus that can be spread through airborne transmission, as well as droplets, and comes a year after healthcare workers wrote an open letter calling for FFP3 masks to be available for all staff working with patients with confirmed or suspected covid-19.

The BMA has welcomed the recommendation but said it must now also be extended to general practices. Its occupational medicine co-chair Raymond Agius said, "Now that doctors and healthcare workers in hospitals will be wearing respiratory protective equipment (RPE) it makes no sense that GPs are still having to make do with ineffective surgical masks, often in small and cramped surgeries, particularly as we know omicron is highly transmissible.

"With this change in guidance, we ask that, without delay, GPs and their staff have better access to safe and effective RPE through the newly announced national portal."

The guidance said FFP3 respirators must be worn by staff caring for patients with a suspected or confirmed infection spread by the airborne route and when performing AGPs on a patient with a suspected or confirmed infection spread by the droplet or airborne route.

Elisabeth Mahase, *The BMJ*

Cite this as: *BMJ* 2022;376:o176

Specialist nurses to staff new cancer hotline for patients

A cancer hotline for the public is set to be launched so that patients don't have to go through their GP to access diagnostics, MPs have been told.

The hotline, to be staffed by cancer nurse specialists, was announced by Maria Caulfield, patient safety and primary care minister, to MPs on the Health and Social Care Committee at their latest hearing on cancer outcomes, held on 20 January.

The committee had previously heard from experts who warned that England was set to miss cancer targets for 2028 outlined in the NHS long term plan.

In January 2019 the government promised that 75% of cancers would be diagnosed at an early stage (I or II) by 2028. The Nuffield Trust found in 2018-19 that an average of just 44% of the eight most common cancers were diagnosed at stage I or II and that by May 2020, early in the covid pandemic, this proportion had fallen to 38%.

A cancer patient told MPs she felt she was treated like a statistic

Brushed off

The committee hearing opened with a personal account from Judith Neptial, a patient with terminal cancer, who described feeling brushed off by her GP and said that she was "treated like a statistic, not a patient." In response, Caulfield, a former nurse, outlined how the government was working to improve services.

She said, "We're piloting a cancer hotline, where patients themselves—if they feel that they are not being listened to or they're having difficulty getting assessments done—can phone up that hotline, go through their symptoms, go through the experience that they've had, and that cancer nurse specialist can get them into the cancer pathways.

"So, we're trying to open up, so that it doesn't

Hospital staff food campaign hots up

Hospitals are facing pressure from a grassroots campaign to provide nutritious hot meals to staff who work night shifts and at weekends.

In many hospitals, catering for staff is based on regular office hours, with canteens opening from Monday to Friday for breakfast and lunch. Some sites open for longer, but most staff who work weekends, overnight, or on public holidays are likely to struggle to buy food, particularly if they want a hot and healthy meal.

RICHARD GRAY/ALAMY

The #NoHungryNHSStaff campaign was launched two months ago by Neely Mozawala, a community specialist diabetes podiatrist in Somerset, to highlight the poor state of food available for staff and to push for change.

It is already having an effect. Pilot schemes to increase the availability of food at night have been announced at several hospitals, and John McDonnell, a Labour MP, has sponsored an early day motion calling on the government to provide the funding necessary to enable every hospital trust to provide a 24 hour hot food canteen service.

The aim of the campaign is to achieve access to hot, nutritious food in every trust 24 hours a day, ideally by extending canteens' opening hours. This would be supported by increased provision of "smart" fridges, which give staff access to food that they can warm up, and extended opening hours at outlets such as M&S and WHSmith that sell meals.

"The main thing is [that] it is 24/7, it's healthy and nutritious, and everyone has access to it," said Mozawala.

In January 2019 the government promised that by 2028 75% of cancers would be diagnosed at an early stage. The Nuffield Trust found in 2018-19 that an average of just 44% of the eight most common cancers were diagnosed at stage I or II and that by May 2020, early in the covid pandemic, this proportion had fallen to 38%

always have to be the GP that necessarily gets them into that process."

Caulfield also highlighted the rapid diagnostic centres that the government had started rolling out in 2019 as a way to improve cancer outcomes, particularly early diagnosis.

Shortage of cancer nurses

Another concern raised during the hearing was the issue of staffing. Mark Foulkes, lead cancer nurse at the charity Macmillan, said that his organisation's 2017-18 census found that around 30% of specialist cancer nurses would be retiring within the next 10 years, with some areas of the country seeing even higher rates.

He asked, "Who is going to replace these people? These are the people who are a major factor in delivering quality care to patients and families with cancer. They are very experienced nurses, and even if we started to train them now there would still be a gap."

Foulkes also noted that rising numbers of cancer diagnoses in the ageing population would require a doubling in the number of specialist nurses and that nothing had been done centrally to tackle the predicted increase in demand.

Elisabeth Mahase, *The BMJ*
Cite this as: *BMJ* 2022;376:o186

Trusts aren't prioritising access to hot food, and that's what I want to get across Neely Mozawala

"The accessibility is what's lacking, trusts are not prioritising it, and that's what I want to get across."

Lack of progress

In 2014 an independent report commissioned by the Department of Health led to legally binding standards on the nutritional quality of the food served to staff and patients, but it stopped short of making 24 hour healthy food mandatory.

The BMA's Fatigue and Facilities charter from 2018, which trusts are encouraged to sign up to, says catering facilities serving fresh meals to staff should be open 365 days a year for breakfast, lunch, and dinner, to at least 11 pm and then for a further two hours from 11 pm to 7 am. Hot food should be available at other times through a supply of microwave meals or similar, it recommends.

Mozawala said, "I'm tired of getting reviews and recommendations. Everyone thinks that they can just bypass recommendations: it's not acceptable. Staff are suffering." She called on NHS staff to write to their MPs to ask them to sign the early day motion.

Ingrid Torjesen, London
Cite this as: *BMJ* 2022;376:o167

Inspectors must take account of challenges faced by ethnic minority GPs, say leaders

Regulatory system failures that leave ethnic minority GPs fearing Care Quality Commission inspections and being "harassed" by their demands have been confirmed by authoritative new evidence, say doctors' leaders.

The British Association of Physicians of Indian Origin (BAPIO) said the CQC's review of its own oversight regime backed the association's findings of GPs' poor experiences and the need for regulation to take their particular working conditions and support needs into account.

BAPIO said, "Ethnic minority GPs often work in areas of complex need, high levels of deprivation, and inadequate funding and often are the targets of abuse and complaints. This toxic mix, compounded by systemic and regulatory biases, simply exacerbates the disparities in outcomes."

It urged the CQC to take a more supportive and compassionate approach to inspections, one that took account of GPs' particular challenges. "This report must lead to meaningful change, especially with massively overstretched and exhausted staff who have been working very hard throughout the pandemic," said Kamal Sidhu, chair of BAPIO's GP forum.

The CQC pledged to make the system fairer, including reviewing and strengthening how it considers the context in which practices work when it assesses them.

PRACTICES LED BY ETHNIC MINORITY GPs ARE MORE LIKELY TO BE SINGLEHANDED AND TO HAVE MORE DEPRIVED PATIENTS

Rosie Benneyworth, the CQC's chief inspector of primary medical services and integrated care, said, "It is clear from the experience of the GPs who spoke to us that the challenges they face can be magnified by factors that are outside their control and make it harder to evidence the quality of care that they offer.

"Ethnic minority led GP practices are often not operating on a level playing field in terms of where they work and the support available."

The CQC's review followed complaints from GPs from an ethnic minority background about unfair treatment and disparities in regulatory outcomes.

Owing to limited data, it couldn't establish a relation between practice leaders' ethnicity and inspection ratings. But the review identified "contextual" factors that can disproportionately affect practices led by ethnic minority GPs and their ability to show how they provide good care.

Such practices are more likely to be singlehanded and to have more deprived patients. These factors, and others such as resource constraints and lack of support from external bodies, can affect their ability to achieve some national targets and increase challenges in recruitment and funding. Some practices were also more likely to say they would be negatively affected by the ability to challenge ratings through feedback mechanisms, with some identifying a possible risk of victimisation, poorer ratings, or re-inspection if they raised complaints.

Matthew Limb, London
Cite this as: *BMJ* 2022;376:o171

IN A SURVEY of 771 general practices 31% of those led by ethnic minority doctors agreed or strongly agreed that their inspection outcome was adversely affected by ethnicity, compared with 0.3% of non-ethnic minority led practices

Covid-19: How prepared is England's NHS for mandatory vaccination?

Even low numbers of unvaccinated staff could have a massive impact on services
Ruth Rankine

The rule is a significant concern as we're working under intense workforce pressure
Martin Marshall

Education campaigns and individual conversations are driving up rates
Saffron Cordery

How many staff aren't vaccinated and could lose their job?

The new rules in England require all patient facing staff to be fully vaccinated by 1 April and to have had a first dose by 3 February. Several royal colleges and some MPs have urged the government to delay the deadline, amid fears of staff shortages, but on 24 January the government said it had no plans to reverse the policy.

As at 16 January the NHS had 80 092 unvaccinated staff (5.4% of the total). In November the Department of Health and Social Care's impact assessment had suggested that around 5% might remain unvaccinated by 1 April and could therefore lose their jobs as a result of the policy.

However, in primary care, data of any description on vaccination rates are hard to come by. Ruth Rankine, director of primary care at the NHS Confederation, said, "We understand from our members that the number of unvaccinated staff in primary care is low. However, given the size of some primary care providers, even low numbers could have a massive impact on delivery of services at a time when it is already severely stretched."

Tracey Vell, chief executive of Manchester Local Medical Committee, said local data gathered through providers and clinical commissioning groups indicated that numbers of unvaccinated staff in primary care were very low but that making vaccination mandatory may pose particular problems for some small or singlehanded practices with unvaccinated staff.

"Anecdotally, it looks like it's small numbers, but it does depend on the question of deployment," she said.

Vell added that although some practices could avoid redundancies by redeploying some unvaccinated staff to remote or digital roles, clarity was needed on how long redeployment could last.

What does the guidance say about redeploying unvaccinated staff?

NHS England guidance says organisations should "proactively identify roles not in scope of the regulations and, if possible and if it doesn't compromise patient care and services, pause external recruitment processes to allow for internal redeployment." But it indicates that NHS employers are under no obligation to look to redeployment.

In an FAQ document for staff, NHS England says, "If you choose not to be vaccinated, your line manager will discuss with you any reasonable possibilities for redeployment. However, please be aware that redeployment opportunities will be limited, and this will not be a guaranteed option. Also, redeployment opportunities may not be on the same/similar terms and conditions you currently hold e.g. there may be changes to your band, pay and working arrangements."

Medical organisations have criticised this position. A BMA spokesperson said, "Staff in the NHS are its most precious asset and to terminate their employment unnecessarily, when other options might be available, is an unnecessary waste of their skills and expertise."

Has vaccine uptake accelerated since it became mandatory?

Analysis of NHS England data by the *Times* showed that in September, when the government first announced a mandatory vaccination consultation, an estimated 110 004 NHS staff (7.6%) were unvaccinated, before falling to the 80 092 (5.4%) of 16 January.

Again, data are harder to come by in primary care. Vell said she had not seen a particular change in Manchester, noting that every local primary care network had been delivering vaccines, and therefore most GPs were likely to have been vaccinated. "Those who remain unvaccinated probably have really strongly held views that are unlikely to be shaken until it comes to the 11th hour, and we won't know until 3 February if that's likely," she said.

How have leaders reacted?

Saffron Cordery, deputy chief executive of NHS Providers, said a survey of members found a "majority backed this policy as a means of protecting colleagues, patients, and visitors from cross infection by unvaccinated staff."

The BMA has said though it believed every health worker should be vaccinated, it had concerns about "complicated ethical and practical issues" and argued the NHS must not lose staff to the changes.

The Royal College of General Practitioners opposes mandatory vaccination and, along with the Royal College of Midwives and the Royal College of Nursing, has called for a delay to the deadline. Its chair, Martin Marshall, said, "While we don't have the data in general practice to understand how many GP staff will be affected by making vaccination a condition of employment, it is a significant concern at a time when we're working under intense workforce and workload pressures that are being exacerbated by covid, and this is one of the reasons the college opposed this move."

How will NHS trusts and general practices enforce the policy?

Guidance advises employers to "consider an individual's reasons for declining to be vaccinated and examine options short of dismissal, where appropriate." But it adds, "If it's not feasible to implement alternative solutions, staff will be taken through a formal process to dismissal."

The guidance also emphasises that it is important to note "this is not a redundancy exercise." It says, "Employers will not be concerned

GUY BELL/SHUTTERSTOCK

with finding 'suitable alternative employment' and there will be no redundancy entitlements, including payments, whether statutory or contractual, triggered by this process."

Who will monitor compliance?
The Care Quality Commission will monitor and enforce compliance. In theory, the CQC could withdraw registration from trusts, practices, or other organisations that employ unvaccinated staff from 1 April.

NHS Providers has warned its members, "The consequences of staff not being fully vaccinated by the 1 April deadline are clear. No trust leader remotely relishes the prospect of dismissing their staff but they are obliged to implement the law."

Could employers face legal action?
The BMA said that, having reviewed existing case law, it "does not believe there is a reasonable prospect of successfully challenging a requirement that doctors/healthcare staff involved in face-to-face treatment of patients are appropriately vaccinated."

NHS England's guidance says that employing organisations should follow a "fair and reasonable dismissal process" to protect themselves against unfair dismissal claims from staff and sets out various steps that this process should include.

In a separate FAQs for staff NHS England noted that GPs and primary care providers "may wish to seek individual legal advice," because they are independent employers.

What are employers doing to encourage vaccination?
NHS England has published guidance to help trusts facilitate one-to-one conversations with staff members.

Cordery said that in the coming weeks trusts would be redoubling their efforts to persuade vaccine hesitant colleagues to get vaccinated. "We have seen first hand how initiatives such as education campaigns and individual conversations are driving up vaccination rates," she said.

Rankine said primary care employers were "doing all they can to encourage any remaining unvaccinated staff to get jabbed, through one-to-one conversations and addressing any concerns individuals may have about the vaccine."

What advice are GPs seeking?
Londonwide Local Medical Committees said most general practices were focused on ensuring enough staff and not wanting to fire colleagues. Some have been asking about exemptions, and LMCs are advising practices to seek legal advice, as queries are often a matter of interpreting and understanding employment law.

Katie Bramall-Stainer, chief exeutive of Cambridgeshire LMC, said it was "extremely concerned at the proposals, which feel to be poorly determined, poorly judged, and poorly timed." She added, "There is a particular concern for GP employers, who have not received any bespoke HR guidance or support and who stand to face unlimited liability if an employee is found to have been constructively dismissed," she said.

Vell said Manchester practices were reporting "major problems" with exemption forms. "GPs are feeling damned if they do fill them in, in case they put that individual or the population at risk, and damned if they don't because they are the butt of complaints," she said.

Why are doctors refusing to be vaccinated?
Reasons include religious objections, ethical concerns to do with consent and bodily autonomy, and anxiety about potential side effects and long term safety data. In a rapid response published in *The BMJ* in December a group of doctors argued, "Coercing people to have a covid vaccine, either through the threat of legal sanctions or by depriving people of their livelihoods and careers, is not justified due to the prevailing uncertainty about the overall benefits of the vaccines, the unfavourable risk-benefit ratio for many groups, and, not least, the lack of data on long-term harms."

Are vaccine mandates effective?
The Institute for Government noted some evidence that mandatory vaccination against various childhood diseases had increased take-up in some countriess, including France, Italy, and Germany. But it noted Ukraine ended its mandatory MMR campaign in 2006 after negative media coverage and controversy.

Writing in the *New York Times* last month two Harvard medical school professors, Anupam Jena and Christopher Worsham, argued that compulsion met with less resistance than persuasion, because people were used to having to do things they disliked, such as paying taxes, whereas voluntary campaigns required them to revise strongly held views. "'Get vaccinated or get fired' has shown to be an effective message," they wrote.

Gareth Iacobucci, *The BMJ*

Cite this as: BMJ 2022;376:o192

VACCINE UPTAKE ACROSS PROFESSIONS

Is there variation among staff groups or specialties?
Latest figures from the Office for National Statistics show that as at 31 December 83% of health professionals had received three vaccine doses but that uptake varied between staff groups. Among those unvaccinated were:

- 9% of care workers and home carers
- 8% of medical practitioners
- 7% of nursing auxiliaries and assistants
- 7% of pharmacists
- 6% of midwives
- 5% of nurses
- 5% of medical secretaries, and
- 4% of healthcare practice managers.

Among all professions, "health associate professionals," which includes acupuncturists, homeopaths, and reflexologists, had the highest unvaccinated rate at 19%

The proposals feel poorly determined, poorly judged, and poorly timed Katie Bramall-Stainer

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THE BMJ 2021-22 APPEAL

Thank you, readers, for your generosity

More babies, like this little girl in a Médecins Sans Frontières malnutrition care centre in Hera, may survive in Afghanistan, thanks to the more than £122 000 you have so far helped to raise in this year's appeal.

Unicef estimates that around 3.2 million children aged under 5 will suffer from malnutrition this winter, which is one of the many reasons *The BMJ* chose the MSF's Afghan Crisis as its 2021-22 appeal.

MSF's work offers hope to all Afghans, from adults needing kidney stone surgery in Helmand (insert) to mothers and babies needing lifesaving care that would otherwise be unavailable in the Taliban controlled country.

The BMJ's appeal is supported by the Green Room Charitable Trust, which has pledged up to £50 000 to match donations received before 31 January. The Afghan Crisis Appeal will fund MSF's work in Afghanistan, as well as supporting its work in neighbouring countries.

Alison Shepherd, *The BMJ*

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HECTOR RETAMAL/AFP/GETTY IMAGES

EDITORIAL

Medical involvement in atrocities in Xinjiang

The profession must act on the findings of the people's tribunal

In December 2021, the people's tribunal,[1] an unofficial tribunal based in the UK, delivered its judgment following an investigation into "ongoing atrocities and possible genocide" against the Uyghur, Kazakh, and other Turkic Muslim populations in the People's Republic of China.[1] After taking evidence from multiple independent first hand witnesses, the tribunal found proof beyond reasonable doubt that China has committed, and continues to commit, serious, sustained, and intentional violations of human rights and breaches of international law.

On the legally complex question of genocide, the tribunal was satisfied, again beyond reasonable doubt, that China, "by the imposition of measures to prevent births intended to destroy a significant part of the Uyghurs in Xinjiang as such, has committed genocide."[1] However, it found no evidence of mass killing.

VV SHOTS/ALAMY

The large scale and systematic conduct of enforced medical procedures amounts to an atrocity

Crimes

The Chinese government systematically deployed medical professionals, medical skills, and medical technologies in pursuit of these crimes. The tribunal found that detainees were forced to take medicines by mouth or by injection that affected reproductive functioning. Detainees were forced to provide blood samples and subjected to other medical testing for no disclosed reason.

Pregnant women, in detention centres and elsewhere in Xinjiang, were forced to have abortions even in the final stages of pregnancy. In the course of attempted abortions, babies were sometimes born alive then killed. Finally, a systematic programme of birth control measures had been established, including enforced hysterectomies and enforced sterilisation using intrauterine devices that require surgical removal.[1] Between 2015 and 2018 the population growth rates of Uyghurs in southern Xinjiang declined by 73.5%. By 2018 and 2019 population growth had dropped to zero or became negative in several counties.[1]

The large scale and systematic conduct of enforced medical procedures amounts to an atrocity.

Unarguably unethical

Medical participation is unarguably unethical. The World Medical Association's Declaration of Tokyo states: "The physician shall not countenance, condone or participate in the practice of torture or other forms of cruel, inhuman or degrading procedures, whatever the offense of which the victim of such procedures is suspected, accused or guilty."[3]

The Chinese government has denounced the people's tribunal and its findings.[4]

A people's tribunal is not appointed by a government or official international body. It is a quasi-judicial body appointed by civil society. As such, it can be accused of having no status. But unlike single governments or international organisations, a people's tribunal is resistant to political capture. People's tribunals step in where governments and official international organisations fear to tread. Their power lies in carefully assembled evidence and a voice independent of political affiliation.

Response to the overall findings of this tribunal must be international and coordinated. Under President Xi Jinping's leadership of an increasingly totalitarian Communist Party, medical professionals assigned to perform such procedures may have no choice. Sanctioning them individually, even if they can be identified and their involvements verified, may not be appropriate or effective. Such practices cannot be stopped unless the Xi administration accepts the need to stop. This can happen only when China's key economic partners and global institutions such as the UN act together to demand cessation of these atrocities. Healthcare professionals globally have a duty to engage without delay.

These are among the worst violations of international medical codes and standards since they were set out after the second world war. Healthcare professionals must individually and collectively lobby political representatives to demand a thorough, impartial, independent investigation appointed by a credible international organisation.

Given that a core objective of the World Medical Association is "to establish and promote the highest standards of care and behaviour by physicians," doctors throughout the world must also urgently consider whether the Chinese Medical Association can remain a member.

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EDITORIAL

Screening children for type 1 diabetes

Evaluation of screening should be a research priority

Insulin was discovered in 1921, turning a death sentence into a chronic condition, and 100 years later it is still the only treatment for type 1 diabetes. But new approaches are emerging that offer children with this condition a different trajectory.

Type 1 diabetes is caused by autoimmune destruction of the β cells in the pancreatic islets, resulting in insulin deficiency, and is mostly sporadic (>85% of cases). Despite clinical advances, outcomes remain suboptimal, and as many as 70% of children in some countries (25% in the UK, 40% in US) are diagnosed only after life threatening diabetic ketoacidosis.[1]

Evidence is emerging of the benefits of diagnosing children with type 1 diabetes before they experience diabetic ketoacidosis. In an observational study of children and young people with type 1 diabetes from the US (n=3364), diabetic ketoacidosis at diagnosis was associated with worse glycaemic outcomes—a risk factor for long term complications—over 15 years of follow-up.[3] A more recent study of young people with diabetes (n=57 000) showed that absence of diabetic ketoacidosis at diagnosis predicted fewer episodes of severe hypoglycaemia and ketoacidosis after 10 years.[4]

Children who develop type 1 diabetes have more frequent contact with health services in the year before diagnosis, yet the condition is often missed.[5] We believe that nationwide screening should be considered, with robust clinical trials to evaluate potential benefits, harms, and costs.

Diabetes associated islet autoantibodies could be a useful screening tool, since a positive result in an asymptomatic child is strongly associated with later development of diabetes. In an analysis of data from three prospective cohort studies, 84% of children with two or more islet autoantibodies developed diabetes over 15 years of follow-up.[7]

MARTIN RIEDL/SPL

Despite clinical advances, outcomes remain suboptimal

A more recent study from Bavaria screened 90 632[8] children for islet autoantibodies at a median age of 3.1, followed by education, metabolic staging, and clinical follow-up for the 280 (0.3%) children with positive results. Of the 62 antibody positive children who developed diabetes either at the time of screening (n=26) or after 2.4 years of follow-up (n=36), only two had ketoacidosis (3.2%). This compares with an incidence above 20% among unscreened children who develop diabetes.[8]

Islet autoantibody testing is now commercially available in the US,[9] and the possibility of preventive intervention for people with positive results is emerging.

Screening criteria

Type 1 diabetes meets several of Wilson and Jungner's criteria for screening[11]: it is an important condition, and incidence is increasing by 4% worldwide each year. Data from Bavaria, as well as observational studies such as Teddy (The Environmental Determinants of Diabetes in the Young), suggest that screening can be acceptable to families.[8 12] In Teddy, children identified through a screening and monitoring strategy that combined genetic risk with islet autoantibody testing reported significantly better diabetes specific quality of life over the first year after diagnosis than matched community controls diagnosed without screening.[12] Their parents reported significantly lower parenting stress.

Timing

Age 3-4 years has been suggested as the best time to screen children using islet autoantibody testing.[13] However, this strategy would miss the youngest, and often sickest, children who develop diabetes, as well as those who develop autoantibodies later in childhood. Adding genetic data to autoantibody screening may increase the proportion of children identified as high risk, including the youngest children.[14] But many children considered genetically high risk will never develop type 1 diabetes, raising concerns about the acceptability of genetic screening.

The time lag between screening for islet autoantibodies and diagnosis is a further concern.

More research is required to identify the most effective and cost effective screening strategies, and most importantly to quantify the balance of benefits and harms, which include raised anxiety for children and parents and the burden associated with a follow-up programme for children found to be at risk. Trials should include rate of hospital admission at diagnosis as an outcome, as well as short and long term psychological and metabolic outcomes. A hundred years after the discovery of insulin, the evaluation of screening should be a research priority.

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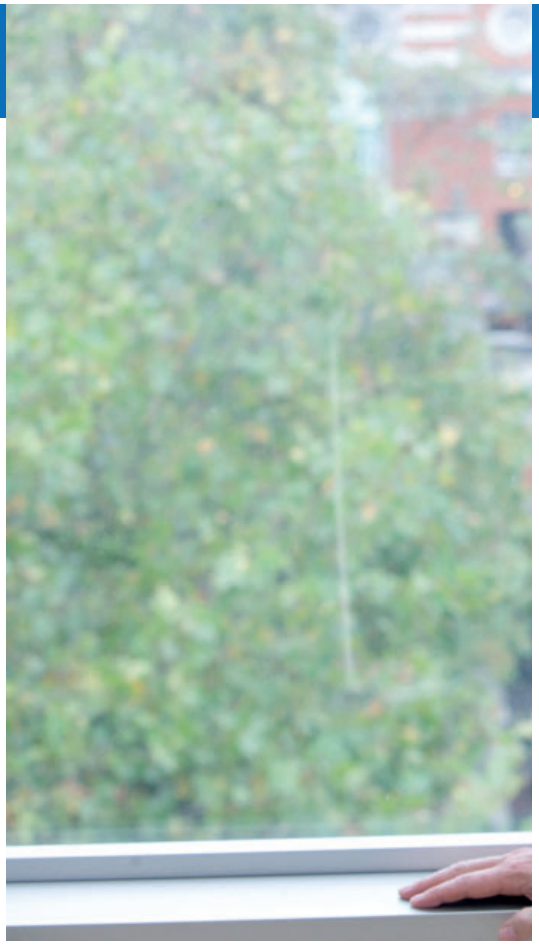
THE BMJ INTERVIEW

Peter Piot: We need deep cultural change to live with covid

The co-discoverer of the Ebola virus tells **Mun-Keat Looi** how the virus and long covid affected him and what the pandemic looks like in low and middle income countries



Peter Piot identified and helped stop not one but two Ebola epidemics, as well as being a pioneering researcher during the HIV/AIDS epidemic of the 1980s. But when covid-19 hit, "Finally, the viruses got me," he told *Science* in 2020.

As a virologist, he'd long warned that another global pandemic was inevitable. But he hadn't expected a coronavirus to be responsible—nor did he expect it to put him in hospital. "I got covid in mid-March 2020, in the very early days of the pandemic," he tells *The BMJ*. "Having gone through hospitalisation and all that, I thought it was over. And then, for around six months, I was exhausted and had lung and heart problems.

"In the beginning, I couldn't go up the stairs. I had interstitial pneumonia, so my x rays were like whites, and I had some cardiac problems. But it was feeling extremely exhausted that's lasted the longest."

Piot says the world wasn't ready for covid and isn't ready for the next pandemic. In 2020, before he got covid, he gave a talk influenced by his experience of HIV. He said the world would probably have to live with this new coronavirus, and he still believes this. "Eliminating SARS-CoV-2 completely is not going to work," he says. "We need to find a *modus vivendi*—a way to live. That may be different from one society to another."

BIOGRAPHY

Peter Piot studied medicine at Ghent University and went on to get a PhD in microbiology from Antwerp University. In 1976 he co-discovered the Ebola virus in Zaire, his research helping to halt the first recorded Ebola epidemic that year and later playing a major role in the response effort to the 2014 west African Ebola epidemic, which led to the first ever vaccines for the disease.

Piot has led research on HIV/AIDS, sexually transmitted diseases, and women's health, mostly in sub-Saharan Africa. He was the founding executive director of UNAIDS and under secretary general of the UN from 1995 to 2008, as well as an associate director of WHO's Global Programme on AIDS.

He served for 11 years as director of the London School of Hygiene and Tropical Medicine, where he still conducts research.

Why have you been so public about your experience of covid and long covid?

Because in the early pandemic days, the idea was that either covid was like the flu or, if you were so called vulnerable and fragile, you ended up in intensive care and died. And I wanted to explain there's a lot in between. I've spent so much of my life working with people living with HIV, and we wouldn't dream of doing anything in research without involving the people who are affected.

I gave a talk when the US National Institutes of Health launched its $1bn research programme on long covid. It was a bit of an emotional one because it was both about my own experience and about the research agenda. Social science says that designing, let's say, a programme for homeless people by putting a bunch of experts in a room and then deciding what's good for these people is not going to find all of the solutions. The solutions may be right but, to figure out how to do it, you need to involve the "experience experts," as we say in Dutch.

Is there enough investment in long covid and postviral syndrome research?

I think it was very slow in coming. Some people told me to my face, "I'm not sure that long covid exists." Today, programmes have started, but when you think about it, they all started in the past six months or so. Why wait a year to get this off the ground?

I can understand why there was hesitation, because long covid is still not that well defined. It's a bit like the treatment of covid-19 itself. In the beginning we thought, OK, antivirals kill the virus—that's the solution. However, we now know that antiviral activity has to start early on. Then, afterwards, it's about modulating the immune system. If you start with suppressing immunity in the acute phase, the virus will get free. We're learning.

I hope that a collateral benefit of long covid related research will be to enlighten what we know about chronic fatigue syndrome and other postviral syndromes. HIV research, which boomed in the 1980s, led to the first really effective antiviral therapies.

When I was a medical student, most physicians would think that you couldn't treat viral diseases because you'd kill the cells together with the virus. Today, thanks to HIV research and incredible investments, we've got therapy for hepatitis of different forms, research on respiratory syncytial virus [RSV] is coming up, and so on. And that's what I think will hopefully happen for long covid, chronic fatigue syndrome, and perhaps some other immunologically driven types of diseases.

Equitable vaccine access is not just a dream: we must make it happen

As an adviser to Covax, is the dream of equitable vaccine access still alive?

It's not just a dream: we must make it happen. But so far it's been disappointing.

Covax [the initiative for global equitable vaccine access] was set up in May 2020, before we knew a vaccine would be effective. That was real foresight. But we underestimated two manufacturing challenges.

Companies were very fast in developing the vaccines, but the whole manufacturing of billions of doses of vaccines didn't go as planned. The big vaccine producers—Merck, Sanofi, GSK, those with the most experience in vaccine production—were not in the game. That led to scarcity, and scarcity is one of the biggest enemies of equity because those who have the power or the money will make sure that they have it. The whole history of healthcare is about that.

We also underestimated the protective reflexes of various governments. With the US, for instance, first President Trump invoked the National Defense Act, and President Biden's arrival has made no difference. US companies cannot export anything that could be used to make vaccines. That goes not only for biological materials but also for filters and all of the kinds of plastics you need.

Then we had India, which Covax had relied on and which is the pharmacy of the world—the provider of the overwhelming majority of vaccines, not just for covid-19 but all childhood vaccines too. When they had their covid emergency [in April 2021], Prime Minister Modi said "our manufactured vaccines are for our people first." Of course, any politician is elected by people from their country and not from some other country, so their priority is to their citizens.

So, what can be done to make vaccines available globally?

Frankly, there are no simple solutions. We clearly need more manufacturers. The EU has allocated over €1bn to support vaccine manufacturing in Africa. It's not going to provide a single vaccine tomorrow, but hopefully it will by the end of the year. Each region needs to have that capacity because there will be other epidemics.

This is turning a crisis into an opportunity: for the first time there will be serious investments in vaccine manufacturing in Africa, the continent with the fastest growing population, which will need childhood vaccines and more. I'm moderately optimistic that the first half of this year will see a major boost in vaccine manufacturing.

Vaccine inequity is one of the biggest injustices in the world, and it's something that's very close to my heart, because in the late 1990s and early 2000s I spent most of my time trying to get antiretroviral therapy to treat people with HIV in low income countries. Back then the problem was quite different—not supply but cost. It was about $12 000-$14 000 per person per year, and we brought that down to about $300 thanks to the production of generic forms of medicines, particularly by Indian companies.

I realise it's different with vaccines because making a vaccine is far more difficult and complex than producing a drug, which is a chemical process. We need to all work together to ensure there are more manufacturers.

Once the supply is there, we need to tackle the next stage: getting the vaccines to the people in need, because that's also not being done in all countries. We have some African countries with very good experience of childhood immunisation programmes, even very poor ones still manage to reach 90% of children. But with adults, with covid, with the type of vaccines we have, and then vaccine hesitancy and so on, it's a different kettle of fish. Plus the logistics of rollout, of course.

Vaccine inequity is one of the biggest injustices in the world, and something very close to my heart

It's no good if only 50% of a population will accept a 95% effective vaccine. Should research include sociology?

The best vaccines don't work if people don't take them. There's been a gross neglect of social science, research of community involvement, of talking and listening to people. It's interesting that I often find that people in big pharma seem to be more aware of this than people in public health.

We should start from when you do the research. At the London School of Hygiene and Tropical Medicine we were very involved in the Ebola vaccine trials in west Africa and then central Africa. From the beginning we had a community engagement strategy: not just telling people what's good for them but really sitting down and involving, say, religious figures, whatever it takes, and asking for their views on how to do it.

It's not only about the vaccines but about the whole public health and societal response to covid. It's a behavioural change and a cultural change. It goes very deep. And that's something we should invest in because this virus is going to be with us for quite a while, maybe forever. And hopefully, every winter when we have an outbreak it will be a bit better, with fewer deaths.

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ESSAY

Why doctors have a moral imperative to prescribe and support medical cannabis

In the three years since prescriptions of the drug became legal, just a handful have been made. The reasons: stigma, fear, and an entrenched resistance in the medical profession that is harming patients, writes **David Nutt**

The field of medicine developed empirically with doctors doing what they could to help reduce the suffering and improve the health of their patients. Medicines were what doctors gave patients to assist this process. Medical cannabis presents a novel challenge to current medical practice—many patients reporting large benefits from self-medicating with illicitly sourced products would dearly like to have them prescribed on the NHS but are unable to do so.

Cannabis has been classed as a medicine in the UK since November 2018 (box). The decision to make it available as a medicine was precipitated by the case of Alfie Dingley, a boy with severe epilepsy who nearly died after returning from Canada when his medical cannabis was confiscated by custom's officers. Sally Davies, then the chief medical officer, recommended the government move plant based cannabis extracts from schedule 1 to schedule 2 of the 1971 Misuse of Drugs Act, at the request of the home secretary.

In the subsequent three years, however, only a handful of prescriptions have been made on the NHS. So most of the estimated 1.4 million patients using it are doing so with illicit supplies—with all the legal and product dose and quality risks that entails. Others are paying hundreds or even thousands of pounds a month for their medicine from private specialists.

BIOGRAPHY

David Nutt is a psychiatrist and professor of neuropsychopharmacology at Imperial College London. He trained at Cambridge, Guy's Hospital, and Oxford University in the UK, and the National Institutes of Health in the US. His research focuses on how drugs work in the brain and the mechanisms underpinning psychiatric disorders, particularly addiction and depression. He has published over 700 research papers, 36 books, and 8 government reports. He founded the charity Drug Science in 2009 and won the John Maddox prize for standing up for science in 2013.

The law might have looked like a solution for children who need cannabis to live, but in practice it was not

One reason for this lack of prescriptions is a condition of the law stating that only specialists can initiate prescribing, not GPs (although a GP can continue prescribing after treatment has been started). And although there are GPs who would prescribe cannabis if they could, there remain others who dare not. So the 2018 legislation might have looked like a solution to the problem of children such as Alfie, who require cannabis to stay alive, but in practice it was not.

A 2021 GP survey found that 24% of respondents wanted to be allowed to prescribe. What is holding the UK back? The reasons are multifactorial and complex. But one thing stands out: the resistance of the medical profession to endorse this new treatment paradigm.

Do no harm

Perhaps the most egregious example of medical resistance came from the current chief medical officer, Chris Whitty, in a statement to the Health Select Committee in 2019. When asked why medical cannabis was not being rolled out, he replied, "We have to conduct research in such a way that we avoid another thalidomide tragedy."

Another more clinically immediate example is the refusal of the British Paediatric Neurology Association (BPNA) to recommend NHS prescription of medical cannabis to children with severe treatment refractory epilepsy, in whom it has shown unprecedented efficacy and allowed many children to stop taking multiple ineffective epilepsy drugs. The first case series of 10 patients has been replicated in a further 10 patients and published in *BMJ Paediatrics Open*. A bayesian analysis of treatment efficacy of medical cannabis in these 20 patients predicts that any future patient has over a 90% chance of a good response (L Phillips, personal communication, 2021).

The BPNA's reason for refusal is that there is "no evidence of efficacy," despite each of these 20 patients having shown a response, sometimes a 100 times reduction in seizure frequency. In many of these children, the medical cannabis worked despite Epidyolex, the only authorised cannabinoid medicine for epilepsy, having failed. In contrast to the BPNA guidance stating that prescribing medical

From left: the Alfie Dingle campaign to change the law; Lucy Stafford, who has been able to leave hospital after taking medical cannabis; and Sativex, used to treat muscle spasticity in MS

Medical cannabis in the UK

NICE guidelines recommend four licensed cannabis based medical products that can be prescribed in the UK:

- Two tetrahydrocannabinol (THC) based medicines: dronabinol, licensed for appetite loss in AIDS and as an antiemetic in chemotherapy, and nabilone, licensed for nausea in people receiving chemotherapy
- Sativex, a combined THC and cannabidiol medicine for muscle spasticity in multiple sclerosis
- Epidyolex (99.8% cannabidiol with less than 0.1% THC) for two rare childhood epilepsies (Lennox-Gastaut and Dravet syndrome)
- A multitude of other unlicensed cannabis based products (such as oils and herbal cannabis) are produced to good manufacturing practices standard and can now be prescribed.

cannabis is probably not in the best interests of children, the above case study series clearly and consistently shows that, for these children, medical cannabis treatment is in their best interests.

The hostility of the BPNA to medical cannabis culminated in their reporting to the GMC a doctor who was legally prescribing full spectrum cannabis for childhood epilepsy with good anticonvulsant effect. The GMC exonerated the doctor in question and emphasised that his action was fully compliant with current guidance. The BPNA's own expert said that the association was not acting in the best interests of the children. This bullying action by the BPNA has been discomforting and stressful to the families and the doctor.

Another remarkable example of the therapeutic benefits of medical cannabis is the case of Lucy Stafford, a 21 year old with Ehlers-Danlos syndrome. She had been in hospital almost permanently since experiencing joint dislocations after her first surgery aged 10, then she had 19 further operations throughout her teenage years, becoming bedbound at 17 and on heavy doses of opiates including fentanyl, despite which the pain was severe and disabling. She developed gastroparesis from the combination of Ehlers-Danlos syndrome and opiates, which required intravenous nutrition from the central line that then led to sepsis with six admissions to intensive care.

Her pain specialist suggested medical cannabis as a last resort for the extreme pain from a permanently dislocated jaw. The prescription was turned down for NHS funding with a letter saying that cannabis was unlikely to work and that there was a one in four chance she would end up with psychosis. Stafford and her mother went to Amsterdam and sourced medical cannabis. Slowly but surely, her jaw began to unlock. She was able to reduce her opiates and other medications. She has since become able to walk unaided, and she started a degree in neuroscience at Sussex University in September.

Stafford's private prescription for cannabis initially cost £1450 a month. Now, thanks to the Project Twenty21 initiative, this is down to £450 a month. This initiative is a collaboration between the charity Drug Science (which I founded and of which I am trustee) and six registered producers. Project Twenty21 facilitates access to medical cannabis at cost price after patients have been seen and received a diagnosis from a specialist. This represents a massive saving to the NHS—when Stafford was on a feeding tube, her medication alone cost over £250 a day, and the hospital room was very much more; overall more than £100 000 a year. Despite these huge savings, her local Cambridge hospital trust refuses to allow her doctor to prescribe cannabis for her on the grounds of "lack of evidence of efficacy." One wonders what evidence could ever convince them that medical cannabis works?

Stigma and fear

The UK position reflects many different factors but standing out is a deep—hopefully subconscious—stigma in UK doctors, hospital pharmacists, and clinical commissioning groups against medicines that have not been developed in the now conventional manner of drug industry driven randomised controlled trials (RCTs) with subsequent NICE approval.

Let us examine the arguments made against prescribing medical cannabis. One is that medical cannabis might be harmful because of a lack of traditional preclinical safety testing. As Whitty indicated, the fear is that without this testing another thalidomide tragedy is possible. This argument has many flaws. First, preclinical testing would not have detected the risks of thalidomide as it doesn't cause malformations in rodents. Moreover, both THC and cannabidiol have been through preclinical toxicology studies and proved not to be teratogenic. More importantly, cannabis has been used as a medicine for millennia without any signs of fetal harm; with tens of millions of recreational users in the US, Canada, Holland, and Spain, among other countries, many of whom are women, no such issues have been reported.

Similarly, some detractors say that RCTs are needed before any conclusions on efficacy can be proved. This is a common misunderstanding of the nature of medical evidence. Although care should be taken when comparing clinical responses without head-to-head comparisons (owing to differences in study design, population, and so on), Michael Rawlins, former head of the Medicines and Healthcare Products Regulatory Agency and NICE, pointed out in 2008 that RCTs are not the apex of treatment trials. He argued that there were many other forms of evidence that can equally inform medical practice. These include patient

reported outcomes, real world evidence, effectiveness trials, and case series.

RCTs are expensive and, with new medicines, largely conducted by for-profit drug companies. Very few of the cannabis responsive conditions reported by patients are being studied. Reasons for this include difficulties in patenting whole plant extracts given their complex mixture of minor cannabinoids and reluctance of the UK to license plant based medicines. The traditional RCT approach was used for cannabidiol in two forms of childhood epilepsy (Lennox-Gastaut and Dravet syndromes) by GW Pharmaceuticals. It took 20 years to complete, and the company's application for NHS use was then turned down by NICE on grounds of cost efficacy (though this has now been reversed). Unsurprisingly, other companies have seen this as a serious barrier to moving into this field. If the same requirement for RCT evidence had been applied to penicillin, it might never have been developed as a medicine.

RCTs are also not representative of patient groups because patients with comorbidities are usually excluded. Project Twenty21 data indicate that most of the patients included in the initiative have various comorbidities, including major depression and other brain disorders such as insomnias.

Another commonly expressed concern, as stated to Lucy Stafford, is the risk of dependence and psychosis. Again, international data show that this doesn't occur to any substantial extent—an audit of 100 000 Canadians found two cases each of psychosis and schizophrenia and similarly few examples of dependence. Though the risk of cannabis causing an enduring psychosis is still controversial, we know that the most risky products have a high concentration of THC without the protective effects of cannabidiol—for example, skunk, used by young people to achieve intoxication. The risk is markedly mitigated when cannabis is prescribed under medical supervision. A detailed explanation of the reasons for this, with safer use guidelines, is given in Schlag and colleagues' recent review. Additionally, open communication between doctor and patient about both benefits and risks of medical cannabis, as well as continuous pharmacovigilance, will ensure patient safety.

Some doctors may have the paternalistic attitude that patients should defer to medical experts rather than discover their own solutions. A recent qualitative study of parents and carers using medical cannabis to treat their child's epilepsy supports this conclusion, showing the challenging relationship between the doctor (who often lacks specific expertise on medical cannabis) and the parent (who had to develop expertise to treat their child's condition).

The profession's ignorance of cannabis and the endocannabinoid system coupled with decades of cannabis prohibition justified by the denial of its medical value must also play a part. Chris Whitty's quote indicates a desire to close off discussion rather than have a frank debate about the issues.

Arguments for

We now have a great deal of real world evidence for medical cannabis as the result of patients seeking better treatments for their chronic conditions. Patients are using cannabis medicines for many different reasons, often with singular benefit over previous treatments. To insist that they continue to source cannabis from the illicit market, with its known issues of quality and content, until a commercial company does an appropriate trial is perverse, patronising, and inhumane.

Real world evidence can provide data for specific patients that RCT results in other patients cannot. As every doctor knows, the reality of medicine is that for every patient every new treatment is an n=1 experiment. Individual patient outcome measures are the gold standard of the value of the treatment. The data on severe childhood epilepsies prove this point.

In US states where medical and recreational cannabis are widely used, opioid overdose deaths have fallen

As well as having specific medical benefits, the use of medical cannabis in other countries has had substantial collateral benefits. One particularly encouraging finding—especially given the continuing opioid epidemic in the US—is the possibility of reducing the use of opioid analgesics in patients with chronic pain. Recent patient reported outcomes show that medical cannabis is regularly used as a substitution drug, with the most common medications substituted being opioids, anxiolytics or benzodiazepines, and antidepressants. Substitution frequency is higher for patients using medical cannabis to treat comorbidities (such as the triad of pain, anxiety, and depression) than for those with a single condition. This impact is now seen at a population level—in US states where medical and recreational cannabis are widely used, deaths from opioid overdose have fallen.

Moral imperative

The controversy over medical cannabis seems to be specific to the UK. In many cases it has challenged one of the core elements of medical practice: the doctor-patient relationship. No doctor disputes that good medical practice requires including patients in decision making about their medical plans and to value their reported outcomes and wishes. Legare and colleagues review evidence collected from many studies since the 1970s that highlight the importance of patients as decision makers in their own treatment. This evidence shows that treatment outcomes are better when doctors and patients are in agreement and that it is important to offer holistic and humane care. For many physicians and patients, this is a paradigm shift in the patient-doctor relationship, and adoption has been slow so far. This approach has been part of the development of shared decision making, which evolved from a growing awareness of the limits of medical interventions and of the lack of control over decisions about one's own care. GMC guidelines on decision making and consent emphasise that "shared decision making and consent are fundamental to good medical practice."

There is a moral argument for the medical profession to give up its resistance. Denying patients access to a treatment that could help them or their children until a drug company conducts trials to gain a licence conflicts with a fundamental principle of medicine—that doctors should use the current best knowledge to assist their patients. And drug companies might never bother to study that indication.

Overall, the reasons given by medical leaders and NHS authorities such as NICE for denying the value of medical cannabis seem anachronistic and intellectually dishonest. They go against the medical requirement of doing one's best for one's patient with the extent of knowledge at the time. And they add to NHS costs by encouraging continued use of other ineffective treatments. It is time the UK accepted—indeed embraced—medical cannabis as a major medical advance and allowed all doctors including GPs to prescribe.

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