this week

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"License non-surgical cosmetic practitioners"

MPs have called for dermal fillers to be prescription only, among their recommendations to regulate the sector

A licensing regime for non-surgical cosmetic procedures should be brought in by next July to prevent vulnerable people being exploited, says a cross party group of MPs.

In a report published on 2 August the House of Commons Health and Social Care Committee identified a rise in body image dissatisfaction as the driver behind demand for procedures such as dermal fillers.

The committee's chair, Jeremy Hunt, said, "The government must act urgently to end the situation where anyone can carry out non-surgical cosmetic procedures. We heard of some distressing experiences: a conveyor belt approach with procedures carried out with no questions asked, procedures that have gone wrong, the use of filthy premises.

"It was clear throughout our inquiry that some groups are particularly vulnerable to exploitation in this growing market that has gone largely unregulated. We need a timetable now for a licensing regime with patient safety at its centre."

The Health and Care Act 2022 gives the government powers to introduce such a regime. But a consultation process has not yet happened, and the committee said it was not convinced the government was seeing the issue as a priority.

The report's recommendations include making dermal fillers available only by prescription, in line with Botox. It recommends minimum training and qualification standards for practitioners and a two part consent process, which should include a full medical and mental health history and a 48 hour cooling-off period. Advertisements for treatments must display a kitemark and a warning logo, the committee recommended. Existing and new regulations must be properly enforced, and a new safety taskforce should ensure that a coordinated approach exists to check that practitioners are complying with the law.

The committee said it had received worrying evidence pointing to rising body dissatisfaction contributing to poorer mental health in young people, particularly girls. A survey it carried out found that 80% of the 1550 respondents agreed that their body image negatively affected their mental health.

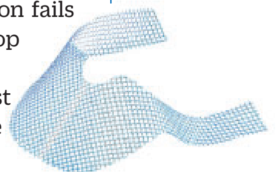
The report urged the government to commission research on causal pathways leading to the rise in body image discontent, including the role of social media. The report also recommended that training in weight stigma issues be integrated into all medical training curriculums.

Jacqui Wise, Kent

Cite this as: *BMJ* 2022;378:o1926

LATEST ONLINE

- Covid-19: Ontario hospitals close wards as nursing shortage bites
- Junior doctors were left without rotas just days before changeover
- Mesh surgeon fails in bid to stop legal action against trust being made public



SEVEN DAYS IN

"Impossible" to be confident covid contracts were awarded properly, say MPs

The government's failure to follow basic rules in awarding £777m of contracts for covid-19 testing to Randox Laboratories made it "impossible to have confidence" the contracts were awarded properly, the Commons Public Account Committee has said. The MPs accused the Department of Health and Social Care for England of "woefully inadequate record keeping" and failing to meet basic requirements to report ministers' external meetings or to deal with potential conflicts of interest.

The report noted that officials were aware of contacts between Matt Hancock, the then health secretary, and Owen Paterson, a Conservative MP and paid consultant for Randox, and of the hospitality that Hancock received from Randox's founder, Peter Fitzgerald, in 2019 but failed to identify any conflicts of interest before awarding the first contract worth £132m in March 2020. It said the department properly declared only four of the eight meetings and kept minutes of only two.

Meg Hillier (left), the committee's chair, said, "We repeatedly hear the reference to the crisis we were facing as a nation. But acting fast doesn't mean acting fast and loose."

A health department spokesperson said, "There is no evidence the contracts with Randox were awarded improperly, as has been concluded by the National Audit Office."

A Randox spokesperson said, "The report is deeply flawed and wrong in assumptions it makes and the conclusions it draws."

Clare Dyer, *The BMJ* **Cite this as:** ***BMJ*** **2022;378:o1893**

Paediatric hepatitis

Preliminary studies suggest link to two viruses

Coinfection with two viruses—AAV2 and an adenovirus, or less often the herpes virus HHV6—may offer the best explanation for recent cases of acute hepatitis seen in children, researchers believe. Two studies, from London and Glasgow, independently found that AAV2 (adeno associated virus 2) was present at high levels in blood samples from patients with unexplained hepatitis. AAV2 is not an adenovirus but is a member of the parvovirus family. Both studies, published as preprints, ruled out the likelihood of recent or prior SARS-CoV-2 infection as a direct cause of the acute hepatitis.

Regulation

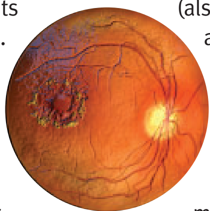
Consultant is struck off over private cancer tests

A consultant paediatrician has been struck off the medical register after a tribunal found that he had led parents, without sufficient investigation, to believe that their children may have cancer, to induce them to pay for expensive tests that he arranged privately. Three different families reported Mina Chowdhury, a private consultant who is based in Glasgow, to the General Medical Council, giving similar accounts of consultations. The tribunal found that he had acted dishonestly for reasons of financial motivation.

Eye care guidance

Rapid recommendation on eye condition treatment

In final draft guidance NICE recommended brolucizumab (also known as Beovu and manufactured by Novartis) as an option for treating visual impairment caused by diabetic macular oedema in adults, the main cause in the UK of sight loss in people with diabetes. The company estimates that more than 22 000 people could receive the new treatment in its first year. The approval was fast tracked through NICE's cost comparison appraisal process, which showed that the new treatment was likely to provide similar or greater health benefits, at similar or lower cost, when it was compared with treatments already recommended in guidance.



Surgery

Concurrent work across two theatres "carries risks"

Researchers warned of the risks of having a single surgeon work across two parallel operating theatres and cast doubt on the method as a means of treating more patients to cut NHS waiting lists. They found no evidence that "overlapping surgery" delivered better productivity than two surgeons focused on their own lists and warned of proved "small but very real risks" to patient outcomes, safety, and training. Researchers led by Jaideep Pandit, clinical director of operating theatres at Oxford University Hospitals NHS Foundation Trust, expressed their concerns in a paper published in *Anaesthesia*.

Emergency care

Third of ambulance workers see deaths linked to delays

A third of ambulance workers have been involved in cases where a patient's death was linked to delays in receiving treatment, a poll by the GMB found. The union surveyed 2358 of its members who were ambulance workers during the first week of July. The findings were summarised in ITV's *Tonight* programme on 28 July, which highlighted the huge pressures facing UK emergency services. The poll also found that 85% of ambulance workers had witnessed delays that seriously affected a patient's recovery.

Stormont government "must tackle crisis"

Northern Ireland's Department of Health must get a grip on the crisis in emergency departments, where difficulty in discharging patients is causing huge pressure, health leaders warned. Paul Kerr, vice president of the Royal College of Emergency Medicine in Northern Ireland, said emergency departments were "dangerously crowded" and patients faced "excessively long waiting times." "The government must prioritise tackling this crisis," he said. "Patients are coming to harm, and staff are overwhelmed."

MEDICINE

Vitamin D

Supplements "don't reduce fractures in healthy elderly"

Vitamin D supplementation did not result in a significantly lower risk of fractures than placebo in generally healthy middle aged and older adults who were not recruited on the basis of vitamin D deficiency, low bone mass, or osteoporosis, in a study reported in the *New England Journal of Medicine*. The 25 871 participants were followed for five years, and the researchers found no difference in the number of fractures in people taking vitamin D and placebo.

Vitamin D supplements did not reduce fractures in older adults in studies

Menopause

Women face "postcode lottery" for initial diagnosis

Many women face significant barriers in obtaining an initial diagnosis of menopause or perimenopause, a report by the cross party Women and Equalities Committee found. The MPs said the postcode lottery determining access to specialist care was "unacceptable," calling on the government and the NHS to ensure a specialist menopause service in every local area of England. The report also urged the government to replace dual prescription charges for oestrogen and progesterone as part of hormone replacement therapy nationwide, with a single charge for all women.

Drug misuse

Deaths remain high in Scotland despite dip

Figures showed that 1330 people died from drug misuse in Scotland last year. This was a slight fall from 1339 the previous year and is the first time the figure has dropped in eight years. But the latest figure is still the second highest annual total on record, and Scotland continues to have by far the highest drug death rate in Europe. Angela Constance (below left), Scotland's drug policy minister, said the number of deaths remained "unacceptable" and said work would continue to deliver investment in treatment services.

Covid-19

NHS promises more support for patients with long covid

The NHS pledged to expand access to tests and checks closer to home for patients with long covid, through extra investment of £90m. Specialist clinics will be able to send people for tests at local and mobile clinics, rather than people going back to their GP surgery, said NHS England. The investment is designed to ensure patients have an assessment within six weeks.

Workforce

Number of full time, fully qualified GPs falls

The BMA expressed alarm at GP workforce data in England showing a fall of 442 full time equivalent, fully qualified GPs in the year to June 2022, especially as the number of patients registered in England rose by almost a million. Samira Anane, workforce policy lead for the BMA's General Practitioners Committee, said, "With no action to address the shortfall and the continuous exodus of GPs, more practices will close and patients will lose access to their family doctor, with huge consequences for their health and an already collapsing NHS."

Cite this as: *BMJ* 2022;378:o1918

HIV

In 2021 there were around **1.5** million new HIV infections, over a million more than the global target

[UNAIDS global AIDS update 2022]

SIXTY SECONDS ON . . . LACTOSE INTOLERANCE

GOT MILK?

I do. But have you herd the commonly accepted theory of how we came to drink cow's milk as adults?

MOOOO?

Humans started domesticating animals and using their milk around 10 000 years ago but probably couldn't digest lactose, the main sugar in milk. Lactase, the enzyme that digests lactose, is produced naturally by infants and small children but gets turned off as they wean off breast milk. Instead, a genetic variation in our DNA called lactase persistence (LP) has evolved to allow us to continue to make lactase. LP has rapidly increased in prevalence over the past 10 000 years.

HOW AMOOSING

Yep, it's become a textbook example of natural selection in humans: milk, which contains useful energy, minerals (including calcium), and many beneficial micronutrients, gave advantages to those who had LP, enabling them to pass on their genes to more offspring than those without.

SO, WHAT'S THE MOOS?

A new study published in *Nature* has cast doubt over this whole theory that the health benefits of milk made us evolve LP. According to a meticulous analysis—using, among other things, milk fat soaked into ancient pots—milk consumption was common for thousands of years before LP started increasing so dramatically. This suggests the rise of the gene is unlikely to have been because it allowed people to drink more milk.

A COW-INCIDENCE?

Researchers have suggested two theories. The first is famine. Basically, LP would have allowed a person to diversify their diet away from just crops and meat, without risking a potentially fatal bout of lactose induced diarrhoea when severely malnourished.

THE STEAKS WERE HIGH . . .

The second theory proposes that some kind of disease threat could have played a role. You were more likely to be killed by a pathogen if you were also suffering from diarrhoea, they hypothesise, giving those with LP an advantage.

Mun-Keat Looi, *The BMJ*

Cite this as: *BMJ* 2022;378:o1905

EXCLUSIVE

Huge GP expenses rise could make some practices "unviable within two years"

GP principals face a pay cut this year because inflation and recommended pay rises for practice staff are greater than the rise in practice funding, meaning practice expenses will take up a larger slice of income.

Modelling of the effects of inflation on practices' profits, prepared for the BMA by former GP committee negotiator Peter Holden (above) and shared with *The BMJ*, shows profits will fall this year by 16%—and in terms of buying power GP principals will experience a pay cut of almost 23%.

Holden said, "The key matter here is not just at what point we stop earning a living, which at 10% inflation is after four years, but at what point do the banks get scared and withdraw our loans, which I think could be as early as the end of next year.

"This is urgent. This is not going to go away. I understand the government not reopening the multiyear deal negotiated with the BMA for pay, but they've got to reopen it for expenses."

Soaring inflation

Funding for independent GPs is tied to a five year deal, which for 2022-23 provides for a 2.1% uplift for all GPs, practice staff, and practice expenses, based on predicted inflation in 2019. Actual inflation is running at 9.4%, however, and predicted to go higher—past 10%—and official pay review bodies have recommended higher pay awards for practice staff: a 4.5% pay award for salaried GPs and a £1400 uplift for nurses (worth at least 4%).

The UK has not experienced such high inflation since the 1980s, when expenses were treated separately. Then, independent practitioners received an increase to cover their expenses plus an uplift to their income that was based on recommendations from the Review Body on Doctors' and Dentists' Remuneration (DDRB). This changed in 2004 when reforms were made to the general medical services (GMS) contract and how it is reimbursed. GPs gave up responsibility for patients out of hours; a new funding formula was introduced, along with the quality and outcomes framework; and expenses were no longer treated separately.

Holden, one of the negotiators of the 2004 contract, said that before 2004, even if the government did not give GPs a rise in income, at least any rise in expenses was covered.

Since 2004 the expenses to earnings ratio has also increased. In 2004-05 this was 55% for GPs on the GMS contract, but by 2019-20 it had reached 69.7%.

Holden has modelled how inflation will continue to increase the expenses

HOW INFLATION WILL ERODE PROFITS

- A group practice with three or four GP partners and gross turnover of £1m with current net profit £333 000 and practice costs £667 000 (expenses to earnings ratio 66.7%)
- Modelling impact of inflation at 8%* a year

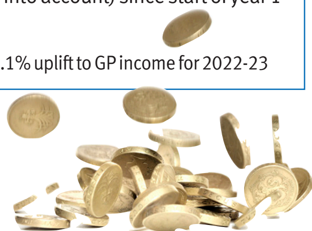
Year 1

- Revised expenses after inflation £720360
- Revised net profit after expenses £279640
- Percentage fall in profit 16.02%
- Actual expenses ratio 72.04%
- Real new profit (taking inflation into account) £257268.80
- Real pay cut (taking inflation into account) since start of year 22.742%

Year 2

- Revised expenses after inflation £777988.80
- Revised net profit after expenses £222011.20
- Percentage fall in profit from baseline 20.61%
- Actual expenses ratio 77.80%
- Real new profit (taking inflation into account) £204250.30
- Real pay cut (taking inflation into account) since start of year 1 38.66%

* Inflation rate of 10-11% minus 2.1% uplift to GP income for 2022-23



GMC is set to lose power to appeal tribunal decisions

Legislation to strip the GMC of its power to appeal decisions by medical practitioners tribunals is set to be introduced next year.

The Department of Health and Social Care has confirmed that it will prioritise the long awaited move, although wide ranging reform of the regulatory regime for doctors will not be implemented until 2024 at the earliest. The department plans to end the GMC's right of appeal in the second half of 2023, along with adding legislation for the regulation of physician associates and anaesthesia associates.

The government accepted the recommendation in the 2018 Williams review that the GMC should lose the right to appeal tribunal decisions. The review followed doctors' outrage over the case of Hadiza Bawa-Garba, a trainee who was convicted of gross negligence manslaughter but suspended rather than erased from the medical register by a tribunal. She was struck off the register after an appeal by the GMC but reinstated by the Court of Appeal.

The move follows the outrage over the case of Hadiza Bawa-Garba

The Williams review concluded that removing the GMC's right of appeal would help tackle doctors' mistrust of the GMC and contribute to cultivating a culture of openness and delivering improved patient safety.

Rob Hendry, medical director of the Medical Protection Society, said the decision to prioritise removing the right to appeal was "thanks to longstanding

to earnings ratio and cut GP principals' pay. Using a baseline expenses to earnings ratio of 66.7%, and modelling inflation at 8% (based on predicted inflation at 10-11% minus 2.1% GP income uplift for 2022-23) the expenses to earnings ratio hits 72% this year. If high levels of inflation continue, the expenses to earnings ratio will pass 90% after four years—and even if inflation falls it is likely to surpass 80% within two or three years.

Investments of £5bn

Holden estimated that GPs had around £5bn invested in premises, including mortgages. "My concern is that if the government doesn't grip this, if the banks start to understand this fully, they'll pull the bank loans long before we go bust," he said.

Kieran Sharrock, deputy chair of the BMA's General Practitioners Committee, said, "Like the rest of the country, GP practices are feeling the pressure of inflation. The costs of running a practice are increasing at the rate of inflation, but practices only received a 2.1% uplift to cover their expenses in 2022-23, while inflation this year is expected to reach more than five times that at 11%.

"On top of last week's significant real terms pay cut for GP practice staff, with no extra funding to practices for staff pay, inflationary pressures will only exacerbate the increasing financial burdens. With the double pressure of massive workloads and increasing costs, we fear that we will lose even more GP contractors on top of the nearly 5000 lost since 2015."

Ingrid Torjesen, *The BMJ*

Cite this as: *BMJ* 2022;378:o1913

campaigning led by the society and supported by royal colleges, trade unions, and grassroots organisations."

The BMA, Medical Defence Union, Royal College of Paediatrics and Child Health, Royal College of Anaesthetists, and Hospital Consultants and Specialists Association sent a joint letter to Steve Barclay, the health and social care secretary for England, last week expressing "deep concern" at the delay in reforming the GMC.

Clare Dyer, *The BMJ*

Cite this as: *BMJ* 2022;378:o1875

Hair loss and sexual dysfunction are long covid symptoms, study finds

People experiencing long covid have reported a wider set of symptoms than previously thought, including hair loss and sexual dysfunction.

Electronic health records of 2.4 million people in the UK from January 2020 to April 2021 were analysed for a study published in *Nature Medicine*. The cohort included 486 149 people with confirmed SARS-CoV-2 infection who were not admitted to hospital, matched with a control group of 1.9 million people with no recorded evidence of coronavirus infection.

"Validates experiences"

Shamil Haroon, associate clinical professor in public health at Birmingham University and senior author, said, "This research validates what patients have been telling clinicians and policy makers throughout the pandemic, that the symptoms of long covid are extremely broad and cannot be fully accounted for by other factors such as lifestyle risk factors or chronic health conditions.

"The symptoms we identified should help clinicians and guideline developers to improve the assessment of patients with long term effects of covid-19 and to subsequently consider how this symptom burden can be best managed."

The study also indicated that women, young people, and people from a black, mixed, or other ethnic minority group had an increased risk of long covid. Being from a poor background, smoking, and being overweight or obese were also linked with reporting of persistent symptoms.

Various comorbidities were also associated with a heightened risk, including chronic obstructive pulmonary disease, benign prostatic hyperplasia, fibromyalgia, anxiety, and depression.

A limitation of the study was the use of routinely coded healthcare data, which may under-represent the true burden of symptoms experienced. Another limitation was potential misclassification bias, as community testing for SARS-CoV-2 was very limited in the first wave of the pandemic.

Anuradhaa Subramanian, research fellow at the Institute of Applied Health Research, Birmingham University, and lead author, said, "Our data analyses of risk factors are of particular interest because they help us to consider what could potentially be causing or contributing to long covid.

The symptoms cannot be fully accounted for by lifestyle risk factors or chronic health conditions

Shamil Haroon

"Women are, for example, more likely to experience autoimmune diseases. Seeing the increased likelihood of women having long covid increases our interest in investigating whether autoimmunity may explain the increased risk."

The Office for National Statistics' latest covid infection survey estimated that two million people in the UK (3% of the population) were self-reporting long covid—defined as symptoms more than four weeks after infection—as of 4 June.

Research carried out by the Institute for Fiscal Studies has estimated that one in 10 people have stopped work because of long covid, with around 110 000 people absent at any one time.

Patient registry for Wales

Meanwhile, the Bevan Commission think tank has recommended setting up a long covid patient registry or similar mechanism in Wales.

Ilora Finlay, co-vice chair of the commission and coauthor of a paper outlining the recommendations in the *Journal of the Royal Society of Medicine*, said, "The need for long term monitoring of long covid is essential to support research, service improvement, and patient engagement."

A registry of patients attending NHS post-covid assessment clinics in England was established in July 2021.

Jacqui Wise, Kent

Cite this as: *BMJ* 2022;378:o1887

People who tested positive for SARS-CoV-2 reported at least one of 62 symptoms more often 12 weeks after initial infection with the virus than those who had not contracted it. The symptoms with the largest significant adjusted hazard ratios were anosmia at 6.49, hair loss 3.99, sneezing 2.77, ejaculation difficulty 2.63, reduced libido 2.36, and shortness of breath 2.20. Other common symptoms were chest pain, hoarseness, and fever.

Regional centres to replace gender identity service

The only service in England that treats children and adolescents for gender dysphoria will be shut down and a network of regional centres established, after a review concluded that a single specialist provider model was "not safe."

The Gender Identity Development Service (GIDS) at the Tavistock and Portman NHS Trust in London will be discontinued after recommendations in the interim report from Hilary Cass (below), former president of the Royal College of Paediatrics and Child Health.

A multiprofessional review group set up by NHS England found that the service operated a predominantly "affirmative, non-exploratory approach, often driven by child and parent expectations" and that there was "limited evidence of . . . a discipline of formal diagnostic or psychological formulation."

Cass's review called for children and adolescents with gender incongruence or dysphoria to receive the "same standards of clinical care, assessment, and treatment as every other child or young person accessing services."

CHILDREN WITH DYSPHORIA NEED THE SAME STANDARDS OF CLINICAL CARE, ASSESSMENT, AND TREATMENT
Hilary Cass

Ongoing research

In a further letter of advice in July to NHS England, Cass has recommended that regional centres should generally be specialist children's hospitals with established academic and education functions to ensure ongoing research and training, an integrated model of care to manage the holistic needs of patients, and staff with a broad clinical perspective.

NHS England said that it was taking immediate steps to establish two early adopter services. One in London will be led by a partnership between Great Ormond Street Hospital and Evelina London Children's Hospital, with South London and Maudsley NHS Foundation Trust providing specialist mental health support.

Northern hub

The second, in the north west, will be led by a partnership between Alder Hey Children's NHS Foundation Trust and the Royal Manchester Children's Hospital, with both trusts also providing mental health services.

NHS England said this was just the first step in commissioning a national network of regional centres over the coming years, with full consultation on the service specification. Its initial view was that the optimal number of services might be seven or eight, but this would be confirmed in due course. The services might take the form of provider collaboratives, with each regional service led by an experienced provider of specialist paediatric care.

Children under the age of 16 with gender dysphoria are sometimes given puberty blockers to stop them entering puberty, but Cass found that there was insufficient evidence to support their routine use.

NHS England has accepted her recommendation that young people being considered for hormone treatment should be enrolled into a formal research protocol, with follow-up continuing into adulthood, and "with a more immediate focus on the questions regarding puberty blockers." It said it would collaborate with the National Institute for Health and Care Research to design and commission the research infrastructure.

The Royal College of Paediatrics and Child Health agreed that a new model was needed to increase capacity and cut waiting times.

Clare Dyer, *The BMJ*

Cite this as: *BMJ* 2022;378:o1916

NEWS ANALYSIS

Tory leadership contest reveals complacency about NHS crisis

The recent televised leadership debates told us very little about Rishi Sunak or Liz Truss's health policies.

The two candidates to lead the Conservative Party—and therefore the country—haven't exactly gone big on how they would solve the fundamental crisis that the NHS is currently grappling with.

How about the gridlock in emergency departments and the pressure being felt across the whole system, including social care? Last month every ambulance service in England had been put on the highest level of alert. Even trust chief executives have admitted they are "presiding over a failing NHS."

But, no, neither candidate had offered any ideas to sort that one out.

What about staff? Neither the NHS nor social care has enough, and vacancies now stand at 105 000. No, nothing here, either.

How about the 6.6 million people on NHS waiting lists, then? Surely the candidates had something to say about

Covid NHS absences surge as pressure grows

NHS staff absences in England reached the highest peak in July since mid-April, amid continuing high numbers of SARS-CoV-2 infections and unrelenting demand for hospital beds.

In a joint editorial published last month the editors of *The BMJ* and *Health Service Journal*, Kamran Abbasi and Alastair McLellan, sounded the alarm at the current situation and lamented the government's inaction in tackling the "covid-driven collapse in services."

Given the current trends, the editors also questioned the government's assertion that the link between infections and hospital admissions had been broken.

Highest peak

Figures published on 14 July show nearly a third of all NHS staff absences in England on 6 July were due to covid (26 874 of the total 84 426). London had the largest (28%) increase over the previous week (3292 on 6 July, up from 2574 on 30 June), followed closely by 25% increases in the East of England and the South East. This was the highest peak during the current wave and represents a rise of more than triple since

this? After all, many of these people will be Conservative Party members, the very group deciding their fate.

This one got scant mention, along the lines that this was a problem that needed fixing.

Not a lot of meat on the bone, then. Either the candidates don't view the nation's health as important enough or they don't have a clue about how to fix the NHS.

But Tory party members are older than the general population (58% are aged 50 or over), and health is one of the issues that they feel most passionate about, so shouldn't the candidates care more?

The BMJ asked both the candidates' campaign teams to share their plans.

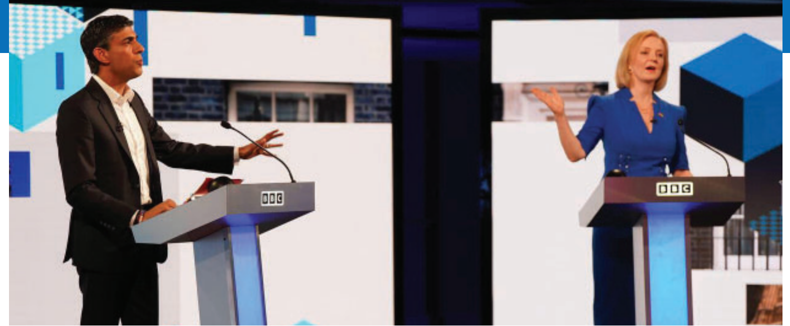
First up, Sunak's team. What about the huge strain on the NHS as a result of the covid pandemic and the huge waiting lists?

"Backlogs taskforce"

Prime Minister Sunak would tackle these by establishing a "backlogs taskforce." This would first audit the waiting lists to understand the true scale of the problem and then ask trusts to contact those patients waiting longer than 18 weeks within the first 100 days of his government. This, in reality, could mean more work for the NHS, not less.

What about tackling the capacity issues? Sunak would seek to make the NHS more efficient by accelerating the use of specialist hubs for elective surgery, his team said. He'd also quickly import staff from overseas: the "best and the brightest doctors and nurses from around the world" would get NHS jobs.

This would be achieved by getting rid of unnecessary bureaucracy and delays to recruitment from overseas. And he'd also give more work to the private sector "to alleviate the strain on the NHS."



Sunak wants to avoid any industrial action, but he also supports allowing the DDRB to advise on pay. That sounds like a difficult circle to square.

Sunak would also make the NHS his number one public service priority. His team pointed that that when he was chancellor he introduced the health and social care levy, which gave an additional £13.5bn annually to the NHS.

Last weekend Sunak added a further idea: £10 fines for people who fail to turn up to GP or hospital appointments. Most experts have always regarded this idea as a non-starter. Apart from anything else, it would lead to yet more unwanted administration and hassle for the NHS.

But what about Truss? What does she promise? Her camp failed to offer a single idea on how to help the NHS. The focus seems to be squarely on cutting taxes and minimising any talk of a crisis.

Either the candidates don't view the nation's health as important enough or they don't have a clue about how to fix the NHS

Adele Waters, *The BMJ*

Cite this as: *BMJ* 2022;378:o1934

STAFF Neither the NHS nor social care has enough, and vacancies now stand at 105000

The most recent comparative data from 7 July showed patients with covid were in 9% of all occupied beds in England (11 8678 of 126 004), while the equivalent figure for mechanical ventilation beds was 7% (232 of 3472)

4 June, when there were 8323 covid absences. But it is still below the highest level recorded this year of 64 000 in early January.

Covid infection rates remain high. Latest figures from the Office for National Statistics show that one in 20 people in England (4.8%, 2 632 200) tested positive in the week ending 20 July, down from one in 17 the previous week.

The week to 25 July saw 10 121 covid related admissions in the UK, and 11 914 patients with covid-19 were in hospital, all requiring treatment in segregated areas. There was a fall in daily admissions from 2005 on 11 July to 1345 on 25 July.

In this most recent wave the numbers of covid related admissions and the proportion of hospital beds occupied by covid patients in England peaked in mid-July and have since declined. Latest daily data show patients with confirmed covid occupied 12 113 hospital beds on 26 July, of whom 290 were on mechanical ventilation.

In England and Wales covid was recorded as the underlying cause of death in nearly two in three of deaths involving covid (65%, 382 of 585) in the week to 15 July, a rise from 62% in the previous week.

Covid deaths

Death certificates mentioned covid-19 as a cause in 694 cases across the UK in the week ending 15 July, up from 529 in the week ending 8 July.

The BMJ asked the Department of Health for England to respond to its joint editorial and specifically whether it could confirm whether it had managed to break the link between SARS-CoV-2 infections, hospital admissions and deaths, as health minister Syed Kamall claimed in the House of Lords on 11 July.

A spokesperson said, "We are making good progress on cutting the longest waiting times—with the number of patients waiting over two years for treatment falling by more than 80% since February—and our community diagnostic centres are delivering over a million tests, checks, and scans to help beat backlogs.

"We are focusing testing on those at higher risk of severe illness, and our covid vaccination programme has saved countless lives and continues to do so—with more than four in five of those eligible receiving their spring booster."

Shaun Griffin, London

Cite this as: *BMJ* 2022;378:o1909

THE BIG PICTURE

“Pay blood scandal victims £100 000”

The chairman of the infected blood inquiry has called for interim compensation payments of no less than £100 000 to be made to each of the surviving victims of the contaminated blood scandal “without delay.”

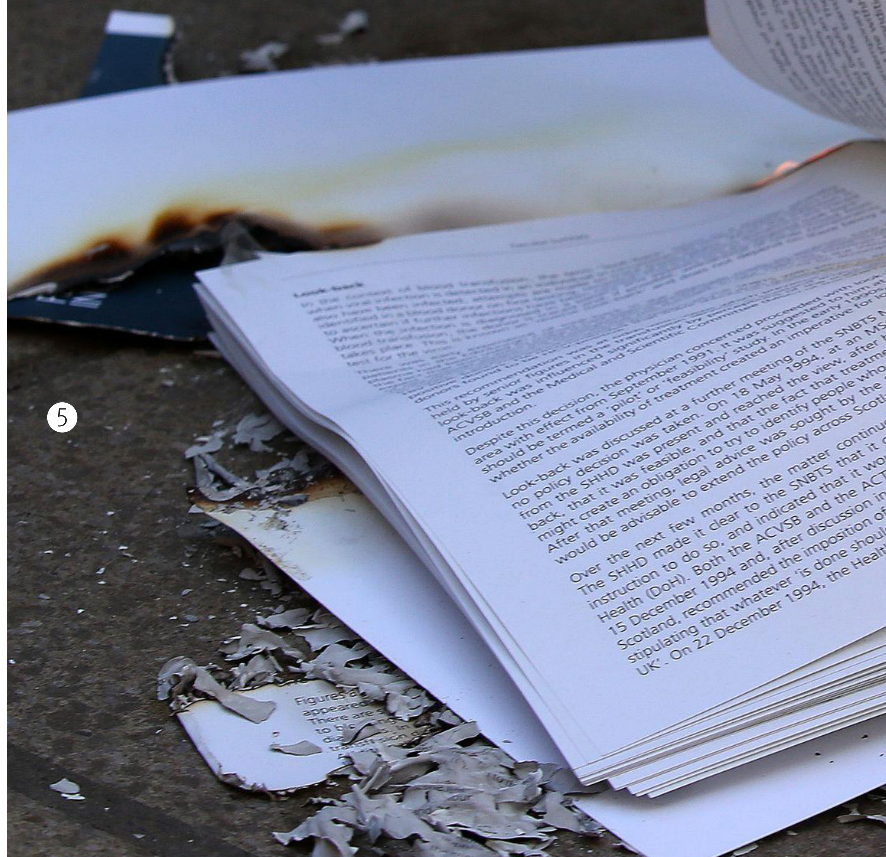
Brian Langstaff made the call as his inquiry published its interim report into the issue of compensation to victims of the scandal, in which at least 2400 people are known to have died after contracting HIV or hepatitis C through NHS treatments in the 1970s and 1980s.

Richard Warwick, who was infected with HIV and two forms of hepatitis as a young boy in 1978 after being given contaminated treatment, said compensation was long overdue. “Finally, after all this time, it’s recognition of the harm that’s been done to us and a way of compensating victims that will enable them to get on with their lives,” he told the BBC.

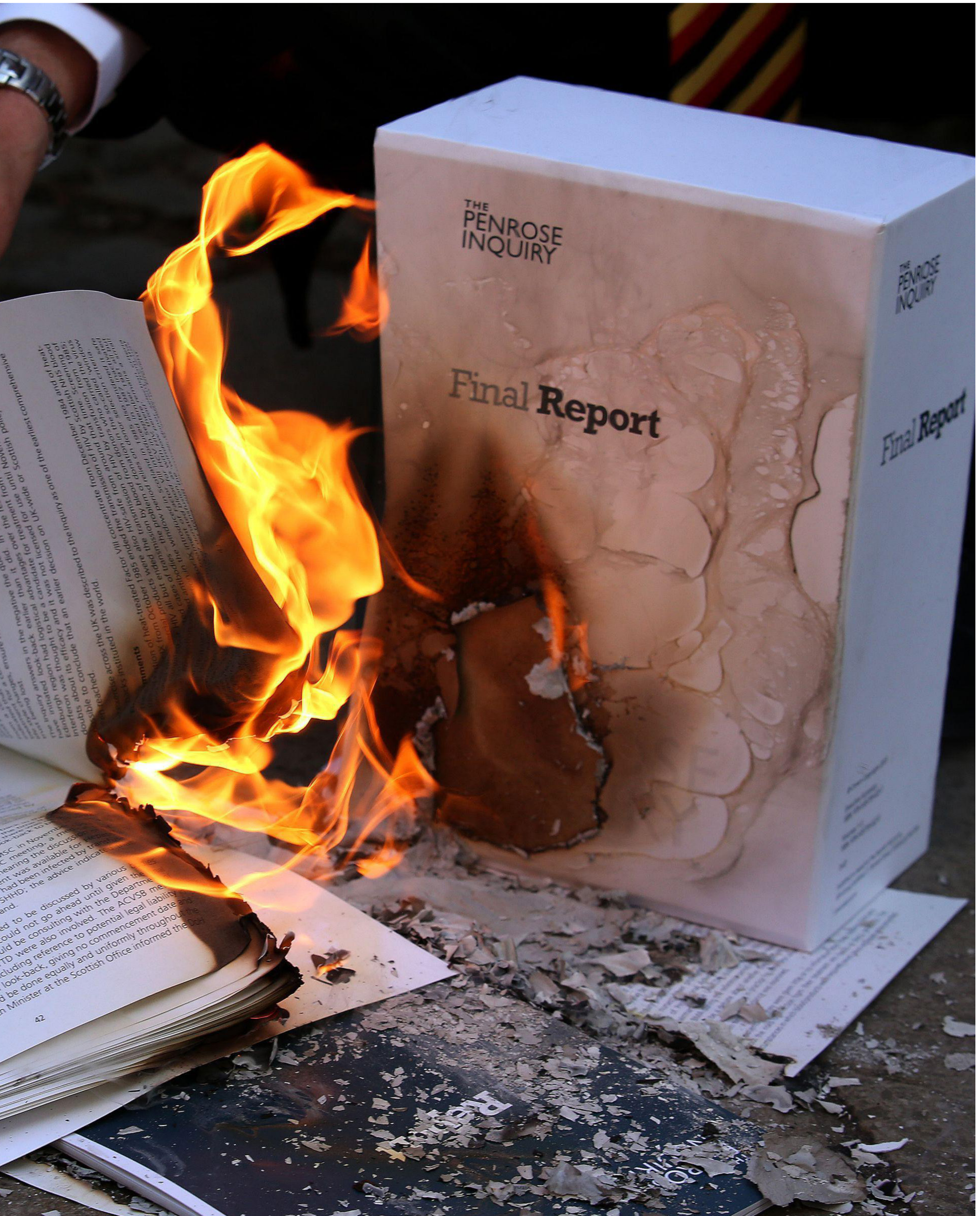
The government has said it would urgently consider the inquiry’s recommendations.

Alison Shepherd, *The BMJ*

Cite this as: *BMJ* 2022;378:o1925



1. Tony Farrugia protests in 2017. His father, Barry, died in 1986 after receiving contaminated blood
2. Messages left in memory of the affected people at the inquiry in Belfast
3. Victims Lee Moorey, Richard Warwick, Neil Steve Nichols, Melanie Richmond, and Neil Weller outside the inquiry
4. Jeremy Hunt, former health secretary, after giving evidence last week
5. The Penrose Report is set alight by campaigner Glenn Wilkinson in 2015



PA/ALAMY

EDITORIAL

WHO: there's "no place for cheap alcohol"

Minimum unit pricing is an effective tool against the harms of excessive consumption

In late June 2022, World Health Organization Europe published a handbook on minimum pricing policies for alcohol.[1] As described by one of the authors,[2] the report is "everything you wanted to know about minimum pricing, in one place."

Minimum pricing for alcohol sets a fixed price for a given volume (or number of standard drinks or units, in the case of minimum *unit* pricing), below which alcoholic drinks cannot be sold.

The new report summarises the evidence for minimum unit pricing: indirect evidence supporting the underlying theory; modelling studies; and direct evidence from evaluation studies. Six common objections to minimum pricing policies are tackled, including whether a minimum price is unfair to people on lower incomes. The rest of the report focuses on practical and legal issues, implementation, and evaluation, and how minimum pricing can complement alcohol taxes.

Currently, 22 jurisdictions in 13 countries have a minimum unit price for alcohol.[1] Evidence of effectiveness has proliferated since the recent introduction of minimum unit pricing in Scotland and Wales and the Northern Territory in Australia.

Scotland has become the poster child for minimum pricing. Alcohol Focus Scotland says minimum unit pricing is the most thoroughly evaluated policy in Scotland's history, and it is no coincidence the WHO report carries a foreword by Nicola Sturgeon, the first minister of Scotland. The recent Scottish evaluation reported equivocal effects on people drinking at harmful levels and people with alcohol dependence.[5] But the latest findings on alcohol sales per head in Scotland are much more encouraging,[6] and some of the feared unintended

RICHARD SOWERSBY/SHUTTERSTOCK

Leaders must keep advocating for a coherent alcohol policy landscape

consequences around cross-border shopping,[7] switching to other substances,[8] and drug crime [9] have not materialised.

Coherent strategy

Civil society and public health leaders must keep advocating for a coherent alcohol policy landscape; good evidence shows that pricing policies on alcohol and other unhealthy commodities can help improve public health. Minimum pricing is an underused policy globally, so from scientific and public health perspectives it is hugely positive that comprehensive evaluations such as that in Scotland are taking place.

Where minimum pricing is implemented, continued attention is needed so the set price remains relevant and effective. For example, today's 50p price per unit in Scotland was first proposed 13 years ago, and last year campaigners called for an increase to at least 65p, to account for inflation.[10]

Minimum pricing has never been promoted as a panacea, so arguments that it does not singlehandedly eliminate harm from alcohol can be rejected.

What would a coherent policy landscape look like? The healthcare system would offer a sliding scale of psychosocial and medical support for people with alcohol problems, suitably resourced, easily accessible, and equipped to manage comorbidities. Alongside this, population level policies to regulate alcohol pricing (such as minimum pricing and taxes), availability (where and when alcohol is available), and marketing (advertising, sponsorship, labelling) are the foundation of a coherent approach. The effectiveness of policies would be routinely monitored and evaluated.

WHO's SAFER initiative to reduce harm from alcohol gives more detail on the policies and interventions that are cost effective.[11] Following WHO guidance,[12] policy making should also be conducted free of interference from alcohol industry representatives and other vested interests.

In Scotland, as the government's review of minimum unit pricing continues ahead of the "sunset clause" (the policy expires in April 2024), the more equivocal findings have been cherry picked by opponents of minimum pricing policies. Longstanding activities of industry groups include influencing research and lobbying politicians so that evidence based policies are replaced by voluntary activities or self-regulation.[13] This is a major challenge to any comprehensive and coherent approach. For example, the UK has announced a reform to the alcohol duty system, with improving public health as one of the stated objectives.[14] Yet at the same time, freezes in rates of alcohol duty are being commended as part of a package of measures to tackle the cost of living crisis caused by high inflation.[15]

The evidence should be considered in a holistic way, and WHO's report is an accessible and practical guide for policy makers and advocates on the wealth of evidence available on minimum unit pricing for alcohol.

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Cite this as: *BMJ* 2022;378:o1810

Find the full version with references at http://dx.doi.org/10.1136/bmj.o1810

Safeguarding children in England

Successful change needs full political backing from the top

The official reports into the murders of Arthur Labinjo-Hughes and Star Hobson[1] and into children's social care[2] come at a time when general child welfare and poverty are growing concerns in the UK.[3]

Both reports were notable for sharing "pertinent information" and for seeking a "reset" and "redesign" of the system and raise matters tackled in previous reports—information sharing, lack of challenge, and the unheard voice of the child.[4-6] They express the need for practitioners to "understand what life is like for a child" and to place "relationships front and centre." The government is called on to "consider the findings in the round."

Recommendations include developing specialist multiagency child protection units, increasing child protection expertise, family support in times of crisis, and amalgamating services into "Family Help" to reduce the number of service handovers. Between them, the reports promote a national child protection board answerable to a ministerial oversight group led by the Department for Education, a reform board led by the education secretary, and regional care cooperatives to tackle profiteering.[7]

Improving practice

They also focus on government leadership and envisage an extended role for the Child Safeguarding Practice Review Panel (the independent national panel that commissions reviews of serious child safeguarding cases) in improving practice. Experience of the care system will become a protected characteristic. Funding is debated in detail, an issue also raised by the president of the Royal College of Paediatrics and Child Health.[8]

Peter Green, co-chair, National Network of Designated Healthcare Professionals for Children, St George's University Hospital, London petergreen2@nhs.net

ADAMA DAVEY/PA/ALAMY

Ensuring loving and supportive relationships for children should be the leading ideology for any new prime minister

This creative thinking is based in social care, and there are gaps. The contribution of the health service to children who are taken into the care system is left for England's 42 new integrated care boards[9] to rearrange. These will have to deal with the challenge of poor and disproportionately fatal health outcomes for children who are looked after by the state. For example, government statistics show 40% of looked after children had special educational needs in social, emotional, and mental health compared with an average of 18% for all children [10] and that people who had been in care were 70% more likely to die than others throughout 42 years of follow-up.[11]

The absence of a strong voice for health in these reports is a silent criticism of the relatively new multiagency child safeguarding partnerships and constitutes a failure that will weaken how clearly the health needs of children will be heard and how constructively attended to.

The statement that "we can never know or understand why the perpetrators of these terrible crimes did what they did"[1] is troubling because it offers no hint that even trying to understand would be worth while. Moreover, it is against the whole purpose of a learning review. Similarly, the statement that "what happened to Arthur and Star was difficult to predict and understand"[1] is hard to fathom. The report points out opportunities to take different actions, implying that these could have changed the outcomes.

The most troubling gap, however, is the lack of awareness that enduring improvement in child welfare will happen only when it becomes the leading priority for the top of government. Practitioners do their best work when the whole system follows identical values and behaviours. But because political leaders do not see children and their needs as the nation's paramount concern, that doesn't happen.

Ensuring loving and supportive relationships for children should be the leading ideology for any new prime minister, who—with their immediate lieutenants—should model the collaborative working necessary for practitioners caring for children. Meeting regularly to build close supportive relationships, removing bureaucratic blocks to effective working, and willingly sharing information will be required.

Those at the top of government should invite and accept challenge from children and young people as well as the wider child safeguarding community. The unique inner world of each child needs regular love and support from adults and leadership from those charged with funding such support.

"Nothing is more important than children's welfare" is the opening sentence of safeguarding statutory guidance,[12] but this declaration will not lead to change unless the nation's leaders back it with action. When the UK government really wants to achieve something (such as the pandemic vaccine programme), it can happen. It is time to bring that drive to bear for babies, children, and young people.

Cite this as: *BMJ* 2022;378:o1760

Find the full version with references at http://dx.doi.org/10.1136/bmj.o1760

FEATURE

What poo tells us: wastewater surveillance comes of age

Sewage monitoring is going through a rebirth as covid, monkeypox, and now polio bring new urgency to virus detection. **Bryn Nelson** reports

Amid widespread polio outbreaks in the summer of 1939, researchers from Yale University first detected poliovirus in sewage samples from Charleston, South Carolina, and Detroit, Michigan. Sweden's State Bacteriological Institute replicated that successful find during an outbreak in Stockholm later that year. Reflecting on their initial discoveries, the Yale scientists concluded: "This virus can be transported, for short distances at least, through the medium of flowing sewage."

Earlier this year, routine wastewater surveillance identified repeated signs of poliovirus in samples from London's Beckton sewage treatment works, which serves roughly 4 million residents in north and east London. It came as a surprise that a nearly eradicated virus could be circulating again in a country where the last case of polio had been documented in 1984.

Then on 21 July, health officials in New York State's Rockland County reported the first clinical case of vaccine derived polio in the US since 2013. Retroactive testing prompted by the case, in which a young man was at least temporarily paralysed, detected the virus in wastewater samples collected back in June for covid-19 monitoring.

Wastewater epidemiology, it seems, has come full circle. The environmental surveillance tool that got its start with polio and soared in popularity with covid-19 has reasserted its potential to sound the alarm on both old foes and new threats like monkeypox, which has been declared a public health emergency of international concern by the World Health Organization. The revelations in our sewage, experts suggest, have offered evidence for why building and maintaining the infrastructure necessary for wastewater-based disease surveillance should be an urgent public health priority.

"With covid we had an expansion of our imagination about what is possible for these tools that our field has used for a long time," Marlene Wolfe, an assistant professor of environmental health at Emory University in Atlanta, told *The BMJ*. As the surveillance method began proving itself more widely, she saw a dramatic shift in how

ANDREW HOLT/ALAMY

Testing at Beckton sewage works identified signs of poliovirus in June

Surveillance infrastructure should be an urgent public health priority

public health officials viewed the new data, from sceptical dismissals to enthusiastic endorsements. "They've said very clearly to us, 'We don't want this data to go away,'" she said.

The covid testing ground

In March 2020, Wolfe and Alexandria Boehm, a professor of civil and environmental engineering at Stanford University, led a team that began testing wastewater at a constellation of northern California and Bay Area treatment plants. The Sewer Coronavirus Alert Network (SCAN) has since expanded to include dozens of testing sites throughout the US.

From its investigative work, the team discovered early on that wastewater solids offered particularly high rates of SARS-CoV-2 viral detection. "We have been building this as a platform to be able to pivot to whatever the next thing is," Wolfe said. "We can take that sample, which is less than a gram of wastewater solids, from communities all across the country: that small sample can represent up to 4 million people in some cases."

In Italy, 167 wastewater treatment plants are now monitored once or twice a week to detect both SARS-CoV-2 trends and variants. Giuseppina La Rosa, an environmental virologist at the National Institute of Health in Rome, said participating agencies in the EU are discussing how they might build on their existing infrastructure.

"Now that we have created such a powerful network of environmental surveillance, the question is how to use it in the future—for example, for other emerging viruses or for antimicrobial resistance or drugs."

In September 2020, Colleen Naughton, an assistant professor of civil and environmental engineering at the University of California, Merced, began tracking the growth of wastewater surveillance around the world. By 20 July 2022, her laboratory's COVIDPoops19 dashboard had tallied more than 3500 testing sites in 68 countries.

Her group's own monitoring work in California's Central Valley, in collaboration with SCAN, has shown how the relatively cost effective early warnings can help inform public health interventions. In the city of Merced, wastewater surveillance detected the original SARS-CoV-2 omicron variant weeks before the first confirmed clinical case there.

As omicron quickly overtook the delta variant in wastewater samples, Naughton said, local public health officials factored the shifting ratio into their decisions about when to stop recommending or authorising the purchase of monoclonal antibodies that were proving far less effective in treating omicron.

Based on a 295 day comparison between wastewater and clinical sequences at the University of California, San Diego, a large collaborative effort likewise detected emerging variants of concern in wastewater

AMIR COHEN/REUTERS/ALAMY

Sewer water surveillance in the early days of covid in Ashkelon, Israel

samples up to two weeks before their identification in clinical samples, along with "multiple instances of virus spread not captured by clinical genomic surveillance."

From a separate sewershed in San Francisco, SCAN has underscored what clinical case reporting can miss. Unlike the correspondingly sharp peaks in reported SARS-CoV-2 cases and wastewater viral levels during the delta and initial omicron waves, the current surge—attributed largely to the omicron BA.5 subvariant—appears much more modest if based on case data alone. But the spike in wastewater levels measured at the San Francisco site and many other locations suggests that the case based signal is hiding a much more dramatic surge. "If you look at the wastewater, we are at least as high as we were in January when everybody was so concerned," Wolfe said.

The decoupling between reported cases and wastewater data—perhaps in part because of a precipitous falloff in more expensive polymerase chain reaction tests, a switch to home antigen tests whose results are less often reported, and a growing lag in data submission by local and state officials—may be contributing to a false sense of lower risk despite high viral concentrations. That upswing, Wolfe said, is also reflected in a spiking case positivity rate that is approaching the heights seen during the first omicron surge. In other words, she said, the wastewater data are providing a clearer picture of the current pandemic than the case data.

Monkeypox and polio

In the UK, meanwhile, officials facing funding shortfalls began dismantling the surveillance infrastructure they had expanded for covid-19, only hastily to reassemble some of the capacity when London's poliovirus discovery forced a U turn. The virus, in fact, was detected through a pre-existing surveillance programme led by the National Institute of Biological Standards and Control, which conducts regular tests in London and Glasgow and reports its results to the UK Health Security Agency (UKHSA). "It's thanks to them that we've had any form of environmental surveillance," Nicholas Grassly, a professor of infectious disease and vaccine epidemiology at Imperial College London, told *The BMJ*.

The detection of closely related polioviruses has since prompted upstream testing from smaller sewer catchments, in coordination with UKHSA, to find where the virus may be circulating. Other sewage treatment works have begun testing to determine whether the virus is circulating elsewhere in the country. Although the London discovery hasn't yet met formal WHO criteria for a circulating poliovirus, the pattern of detection and the related genetic sequences of the captured viral strains both point towards circulating vaccine derived poliovirus type 2, perhaps among "closely linked individuals," said UKHSA.

Pooled samples can capture the contributions of a community without divulging individuals

Polio can be hard to detect if relying on clinical symptoms—as few as one in 500 type 2 cases results in paralysis. "It highlights that environmental surveillance can be more sensitive than reporting of cases of paralysis," Grassly said—not only for countries trying to eradicate the virus but also for countries at risk of importing it.

In California, SCAN began testing for monkeypox on 19 June and detected the first signs of the virus the next day in San Francisco. Since then, six testing sites in northern California have found the virus, including in some communities that hadn't yet reported any confirmed cases. The outbreak has infected more than 18 000 people in 70 non-endemic countries, mainly among men who have sex with men. Stigma and discrimination may be limiting the awareness or willingness of at-risk people to have their symptoms evaluated. Even then, many cases have been misdiagnosed as herpes or syphilis while retrospective testing of archival samples at a large Belgian sexual health clinic revealed three asymptomatic cases dating back to May.

This is where wastewater surveillance can help. The anonymous pooled samples can capture the contributions of a community without divulging individuals. Says Wolfe, "Not only do we capture people who may not be able to—or want to—access a test for whatever reason; we also capture people who don't even know that they might need to be tested." Increasing rates of detection and higher concentrations may point towards a growing burden of disease.

With partners in Ghana, India, and Malawi, Grassly and colleagues have developed a similar technique for detecting the *Salmonella typhi* pathogen in wastewater. Such surveillance works even in urban areas that lack formal sewer systems and have informal drainage channels instead, he said.

"They still function as sensitive aggregators of poo from a lot of people," he noted. "If you do topological maps and drainage models and, ideally, if you have a map of the drainage network itself, you can put those things together and work out where you should sample and also estimate the catchment population for that sample."

Expanding influence

Not every pathogen is reliably shed in faeces, and estimating case counts based on RNA or DNA concentrations in wastewater remains a work in progress. As another tool in the disease surveillance toolbox, though, wastewater epidemiology can provide an invaluable warning sign, said William Hanage, an associate professor of epidemiology at Harvard University. "It would be foolish to rely on it alone—but with other things as well it's phenomenally useful," he said.

An early warning's true use may depend on whether it prompts timely and effective interventions, like vaccination campaigns for covid-19, polio, monkeypox, or typhoid that prioritise the most vulnerable. In the London borough of Hackney, Grassly said, one in three 12 month old infants haven't yet had their full polio vaccination series. A looming question is whether the current scare will help reduce that gap. "People think polio's been eradicated," he said. "We don't think about the diseases that we don't get because of routine vaccination, but it's certainly a wake-up call for us."

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Cite this as: *BMJ* 2022;378:o1869

How accurate were Brexit predictions?

Six years after the referendum we can disentangle the evidence and judge the effects on health and care, says **Richard Vize**

BREXIT TIMELINE

23 June 2016
The majority of people who vote in the referendum choose for the UK to leave the EU

29 March 2017
The UK triggers article 50 and begins a two year countdown to formally leaving the EU

2019
With EU agreement, Brexit is repeatedly delayed. Parties eventually settle on a date of 31 January 2020

12 December 2019—Boris Johnson wins a majority in the UK general election with a promise to "get Brexit done"

23 January 2020
The European Union (Withdrawal Agreement) Act 2020 receives royal assent

31 January 2020
The UK leaves the EU and enters a transition period

31 December 2020
The transition period ends

Predictions that came true

Nurse recruitment from Europe collapsed, although medical recruitment didn't

The European supply of nurses plummeted, but it's been made up by immigration from outside the European Economic Area (EEA). Mark Dayan, policy analyst and head of public affairs at the Nuffield Trust, says, "Before the vote to leave, there was heavy recruitment of nurses from the EEA—more than 10 000 a year at one point—and that was a fairly crucial way in which the health service was trying to fill the shortage of nurses."

The migration of nurses from Europe "fell off a cliff in 2016, partly as a result of Brexit and partly as a result of a new language test that the Nursing and Midwifery Council imposed," says Dayan. "Since then you see quite a rapid pick-up in non-EU nursing migration, especially after the liberalisation of migration rules in 2019. That's gone back to delivering several thousand additional nurses recruited abroad every year."

Low paid workers cannot meet the salary threshold
Layla McCay

Layla McCay, director of policy at the NHS Confederation, says that the points based immigration system introduced since Brexit "has had the biggest impact because it allows doctors, nurses, and various allied health professionals to immigrate to the UK, but low paid health and social care workers cannot meet the salary threshold, and that's probably contributing to their massive shortages."

The addition of care workers to the "shortage occupation list" for 12 months from December 2021 could provide short term relief. Although the new wave of migration has filled the gap left

There hasn't been a stampede of EEA doctors leaving the NHS
Robert Ede

by nurses coming from the EU, the chronic shortage continues, with one in 10 nursing posts vacant. For doctors, the picture is different: the number of licensed doctors in the UK holding a primary qualification from the EEA and Switzerland dropped from around 23 700 in 2013 to 21 500 in 2016, before creeping up again to 23 900 in 2021.

Robert Ede, head of health and social care at the Policy Exchange think tank, says that more rigour by the NHS in identifying EEA staff in recent years may have contributed to the increase. But it's clear that there hasn't been a stampede of EEA doctors leaving the NHS.

However, since 2014 there has been a marked fall in EEA doctors joining the specialist register. Specialties that are particularly dependent on European doctors include cardiothoracic surgery and neurosurgery, says Dayan.

Health tech, life science industries, and research have been hit

Brexit has affected research, health technology, and the life science industries. Specialist jobs have been lost, major research collaborations are in jeopardy, the import and export of supplies such as medical devices and pharmaceuticals is more complicated, and more problems lie ahead.

Symbolic of these harms was the European Medicines Agency (EMA) moving its 775 staff from London to Amsterdam. The Medicines and Healthcare Products Regulatory Agency (MHRA) suffered collateral damage, with a substantial cut to its budget. Martin McKee, professor of European public health at the London School of Hygiene and Tropical Medicine, says, "The MHRA is in a very difficult position because it was so dependent on the work for the EMA and European funding for research and other work. That's going to be a challenge."

He adds that the EMA's departure has affected the pool of talent from which the MHRA can recruit. "It's not just the fact that it doesn't have the money," he says. "It's the ability to recruit expert staff, particularly when you get into areas like biologicals. There aren't a lot of these people around."

Layla McCay says that the main concern for industry is uncertainty about future regulation. She explains, "There's been lots of talk about introducing some form

The MHRA was so dependent on the work for the EMA
Martin McKee

We are now doing business with 27 individual jurisdictions
Richard Phillips

of UK kitemark for medical devices, and there's this ambition for the MHRA to accept global regulatory norms [while maintaining] sufficient alignment with the EU. But there's a lot of complexity that's still being thought through."

Richard Phillips, director of strategy at the Association of British HealthTech Industries, highlights the difficulties of exporting to the EU, with different paperwork required by different countries. He says, "We're not doing business with the EU any more, we are doing business with 27 individual jurisdictions. There are workarounds—but workarounds cost."

Phillips explains that supplying Northern Ireland "has been difficult and slow. I've heard people saying they shipped to Germany, then from Germany to Dublin, and then across the land bridge because it's quicker than trying to get it directly into Northern Ireland."

Exports face the obstacle of no longer being in the single market. McCay says that "UK pharmaceutical exports have dropped by about a third since the referendum."

The battle to save the UK's membership of the Horizon Europe science network is totemic of the way Brexit is undermining research collaboration. Dayan says, "Horizon Europe is looking dicey and is basically being held hostage to the situation with the Northern Ireland protocol.

"The crucial thing is not the money, because the UK is a net contributor—the crucial thing is the chance to be part of these initiatives because they tend to be many of the most cutting edge and influential ones."

Predictions that proved to be wrong

Brexit didn't bring a cut or a jump in NHS funding

During the referendum campaign the Labour Party warned that Brexit would mean "brutal cuts" to the NHS, while Boris Johnson's claim that the UK would take back control of £350m a week that could be spent on the NHS was described by the UK Statistics Authority as "a clear misuse of official statistics."

The Office for Budget Responsibility has estimated that Brexit will reduce long term productivity by 4%, so it's not going to unleash a funding bonanza for the NHS any time soon. At the moment NHS core funding—excluding funding for the pandemic—is continuing to rise in real terms, but the long term economic situation could cause problems.

Ede says, "Where we see potential issues is the wider economic impact of Brexit still starting to be felt. It does mean that we are in a more constrained environment for public sector investment. In terms of the £350m a week pledge . . . Brexit has not improved the supply of resources into the NHS."

No crisis was seen in medicine supplies

A collapse of medicine supplies didn't materialise, as the government and the NHS acted on warnings and put in years of preparation.

McCay says, "The Department of Health and Social Care, NHS England, and the MHRA worked really hard to sort out preparedness. So, whether it was stockpiling, sorting out alternative routes, or working with industry to make sure they were going to be prepared, that's been pretty successful."

Dayan says that the risk of a collapse in medicine supplies was headed off by detailed planning: "going through

medicines [line by line] and trying to ensure that each one had a plan for getting into the UK."

But there have still been shortages of individual medicines. A Nuffield Trust analysis of HM Revenue and Customs data shows that the introduction of customs controls and transport requirements meant that medicine imports from the EU, which have historically made up two thirds of the NHS supply, fell to their lowest level in years.

Procurement rules are no simpler—yet

In the run-up to the referendum, cutting "procurement red tape" seemed to be one of the easier promises to deliver.

The Health and Care Act 2022 gives ministers powers to introduce new procurement rules, while the Procurement Bill going through parliament aims to simplify the rules, such as making it easier to roll over a contract with an existing provider. But new rules don't necessarily make life simpler. With legislation that has yet to be tested in the courts, it could open up new avenues for legal challenge.

Aris Georgopoulos, assistant professor in European and public law at Nottingham University, gives the example of seven procedures being reduced to three, with new definitions. He says, "Some people may say OK, that is more flexible, but from the eyes of a lawyer that gives an opportunity for clarification, so there are a lot of question marks, even after the [government determines] the details."

For managers charged with taking procurement decisions, the move towards greater use of judgment rather than rigid application of rules brings its own perils. Georgopoulos asks, "Would you like to face the music if something goes wrong or if a commotion starts about your decision which was exercised with maximum flexibility, or would you prefer a much more straightforward set of rules?"

There is a body of opinion that the Internal Market Act, feels quite a backward step
Mark Dayan

What most people didn't see coming

Devolved powers over public health have weakened

An indirect consequence of Brexit has been a weakening of the devolved administrations' control of policy on food, tobacco, and alcohol. This is a consequence of the Internal Market Act 2020—how the UK government has implemented Brexit here. Ironically, "taking back control" for the UK has resulted in a loss of control for Scotland, Wales, and Northern Ireland.

Dayan says, "Within the EU, there are certain restrictions on the controls that could be imposed [on food, tobacco, and alcohol], to maintain an internal market, and those occasionally caused trouble with the devolved administrations: you might remember the back-and-forth over the minimum unit pricing for alcohol in Scotland.

"The UK is replacing that with the Internal Market Act, and there is certainly a body of opinion that feels it's quite a backward step. It's administered by the Competition and Markets Authority, which has quite a strong competition remit, and it doesn't have the kinds of overarching duties towards health that the EU does."

This picture of a theatre team at Homerton hospital, east London, went viral in July 2016

JUNAID MASOOD/PA

What most people have forgotten

The European Working Time Directive keeps going

The European Working Time Directive has long divided medical opinion, with the BMA arguing that restricting doctors' hours is essential for patient safety, while others contend that it undermines training in some medical specialties. But, despite the UK leaving the EU, there seems little desire to change or scrap the directive, and it's far from clear that the UK is able to do so.

Dayan says, "It's an open question about whether the UK can diverge on the Working Time Directive, because maintaining a degree of labour protection is part of the agreement with the EU." These are the rules that aim to avoid the UK becoming a low regulation competitor on the shores of the EU.

The bigger picture

While it's crucial to examine the individual policy areas affected by Brexit, it's also important to see the big picture of how leaving the EU has affected UK healthcare, particularly through the lens of the pandemic.

May van Schalkwyk, doctoral fellow at the London School of Hygiene and Tropical Medicine, says that Brexit "undermines those key structures, and resilience in resources and systems, that you want to be as robust as possible when you have unforeseen crises.

"Brexit was a shock to all the systems. We didn't know covid was going to happen, but we always know there's a risk of crises, so during times of stability you should be building your systems, not undermining them. Brexit is almost a complete contradiction to being prepared for a pandemic."

There are a lot of question marks around the new procurement bill
Aris Georgopoulos

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Cite this as: *BMJ* 2022;378:o1870