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JESSICA RINALDI/REUTERS/ALAMY

"Put A&E patients in wards to spread risk"

The Royal College of Emergency Medicine says a continuous flow model will ease the pressure on emergency departments

A "continuous flow model" of care whereby patients are transferred from the emergency department into wards whether or not beds are free could be rolled out across England.

Also known as the proactive flow model, the system is being trialled locally by some trusts. In Bristol a patient is moved to acute admissions every hour and one to the frailty unit every two hours.

The scheme, which aims to reduce patient flow blockages, can mean patients having to share a bay or side room. It has divided clinicians, with some arguing it could cause harm, while others say spreading the risk across the patient pathway, rather than concentrating it in A&E, reduces the risk.

Adrian Boyle, president of the Royal College of Emergency Medicine, said hospitals should consider the model given the huge pressure on emergency departments and ambulance handover delays. He said, "The RCEM has always argued that if you spread the risk across the whole pathway you dilute the risk. It's important to realise this may not work in every setting. However, the risks in emergency departments are so significant at the moment—and that has knock-on effects in the ambulance service—that I think it is beholden on people to at least consider trying this."

NHS response times reached record highs in September, with more than 30 000 patients delayed for 12 hours or more from the decision to admit to actual admission, 552% higher than the same month in 2021 and 7056% higher than September 2019, said the royal college. Ambulance data also showed the average response times for category 2 incidents (such as stroke or heart attack) were more than 2.5 times the 18 minute target.

Bed occupancy also hit the highest on record, with 93.6% of beds filled. Boyle said, "The evidence shows that if you run your hospital at 85% you reduce infection spread, you reduce crowding in emergency departments, and you also stop ambulance handover delays."

Nick Scriven, past president of the Society for Acute Medicine, said better evidence for the flow system was needed. If it were "forcibly implemented" more patients could be moved into units while the flow out remained blocked by policies such as infection control and fire risk, he said.

"Simply offloading patients does not 'share the pressure,' it merely changes its point of focus from relatively well staffed emergency departments to much less staffed other areas," Scriven said.

Elisabeth Mahase, *The BMJ*

Cite this as: *BMJ* 2022;379:o2557

LATEST ONLINE

- US research coordinators are imprisoned for falsifying studies
- AI technologies: guidelines set out training requirements for NHS staff
- GP who repeatedly asked mother to remove her veil and lied about her complaint is suspended

SEVEN DAYS IN

Pharmacists will help run minor ailments treatment services from next year

TIROT / BSIP/ALAMY

From next year community pharmacists in England will be able to run several services normally handled by GPs, including for hypertension, high cholesterol, contraception, and minor illnesses, as part of a pilot scheme funded by NHS England.

Currently, around 1000 of 27 000 community pharmacists in England can prescribe, having completed a qualification. From 2026 all newly qualified pharmacists will be able to prescribe independently from the point of registration.

The Department of Health and Social Care said that Scottish data indicated that enabling pharmacists to prescribe antibiotics for urinary tract infections alone could save £8.4m and 400 000 GP appointments a year.

Gareth Jones, of the National Pharmacy Association, told the *Pharmaceutical Journal* the scheme would lead to a "more convenient medicines service for long term conditions, acute care, and the prevention of ill health" while also freeing up GPs' capacity.

Azeem Majeed, head of primary care and public health at Imperial College London, said, "Pharmacists are capable of undertaking this work, but I would rather see increased investment in core GP services rather than the fragmentation of primary care delivery."

Elisabeth Mahase, *The BMJ* Cite this as: *BMJ* 2022;379:o2523

Covid-19

Study shows infection links to worse heart health

A study of 53 613 UK Biobank participants, 17 871 of whom had covid-19 between March 2020 and March 2021, found that those who were treated in hospital for covid-19 were 27 times as likely to develop venous thromboembolism, 21.5 times as likely to have heart failure diagnosed, and 17.5 times as likely to have a stroke than those who had not had covid-19. The results, published in the journal *Heart*, also showed this group had a higher risk of newly diagnosed atrial fibrillation, pericarditis, and myocardial infarction.

Vaccination rollout stagnates in Africa

Covid-19 vaccination coverage has stagnated in half of African countries, the World Health Organization said. An analysis found that the percentage of people who have had the primary covid-19 vaccine doses barely changed in 27 of 54 African countries from August to October. Just 24% of the continent's population have completed their primary vaccination series, compared with 64% worldwide. Africa is now expected to meet the global target of 70% of people with a complete primary vaccination course by April 2025.

Cancer

"Missing" diagnoses partly account for fall in 2020

More than 38 000 fewer diagnoses of cancer were made in England in 2020 than in 2019. Macmillan Cancer Support's head of policy, Minesh Patel, said that the drop in cases highlighted a large number of "missing" diagnoses. Cancer death rates also fell by 1% in males and 2% in females in the same year. However, male and female mortality rates in the most deprived 20% of areas were at least 53% higher than in the least deprived 20%.

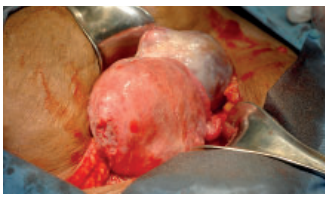
Climate change

Fossil fuel dependence threatens health

Governments and companies continue to follow strategies that increasingly threaten human health and survival, said the 2022 report of the Lancet Countdown on health and climate change, *Health at the Mercy of Fossil Fuels*. It said that climate change was affecting food security, the spread of infectious diseases, and increasing the likelihood and severity of extreme weather, but governments continued to prioritise fossil fuel extraction and burning. The UN secretary general, António Guterres, said, "The climate crisis is killing us. It is undermining not just the health of our planet but the health of people everywhere."

Gynaecology

NICE recommends oral treatment for fibroids



Ryeqo (relugolix combination therapy), an oral gonadotrophin releasing hormone (GnRH) receptor antagonist, has been recommended by NICE for the treatment of moderate to severe symptoms of uterine fibroids in adult women of reproductive age in England and Wales. The oral treatment provides an alternative to injectable treatments and surgery. Trial data showed that just over 70% of women responded to treatment with Ryeqo with reduced blood loss, which compared with 15-19% who took a placebo.

HIV

NHS aims to end new infections by 2030

The NHS believes it will prevent all new cases of HIV by 2030, after it made a number of drugs available throughout England to end regional disparities. Around 148 000 people with HIV now have access to injectable forms of cabotegravir and rilpivirine, and those with drug resistant infections will be able to receive fostemsavir after it was approved last week. Cabotegravir, which is used in combination with rilpivirine, was approved for use in January and is injected only every two months, reducing the risk of resistance developing.

Patient safety

Warrington hospital must improve safeguarding

St Mary's Hospital in Warrington, which cares for adult male patients, has been rated by the CQC as requiring improvement. Managers were warned to ensure patients were protected from abuse and improper treatment by 30 November. Inspectors looked at wards for patients with acquired brain injury and autism in the hospital run by Elysium Healthcare. They found that staff used unsafe handling techniques and did not always report incidents, including those affecting safeguarding.

MEDICINE

Paint fumes have been linked to waning lung capacity in workers

Respiratory health

Gases, dusts, and solvents reduce lung capacity

Workplace exposure to gases, dusts, fumes, and aromatic solvents used in paints, varnishes, and glues is linked to waning lung capacity above and beyond that associated with normal ageing, a study in *Occupational & Environmental Medicine* found. The meta-analysis included 12 studies with monitoring periods lasting from 4.5 to 25 years, and the average age of participants ranged from 33 to 60. Researchers have recommended regular check-ups for workers in these environments to stave off serious respiratory ill health.

Obesity

Poverty and breastfeeding rates link to child obesity

Children are more likely to be obese or overweight in areas of England with higher childhood poverty, lower breastfeeding rates, and fewer adults taking physical exercise, the Nuffield Trust found. Looking at schoolchildren in reception classes and year 6, the report found that poorer access to places for children's physical activity was also associated with a higher number of children being overweight and obese. Liz Fisher, a Nuffield Trust senior fellow, said, "Child obesity disappearing from the government's list of priorities poses a massive risk to young people's health now and in the future."

Overseas news

WHO rations vaccines amid rising outbreaks

Countries confronting outbreaks of cholera will have to administer a single dose of vaccine instead of two because a global resurgence is exhausting international stockpiles, the World Health Organization announced on 19 October. "A one dose strategy [will allow] more people to receive some protection from limited stocks," said Tedros Adhanom Ghebreyesus, WHO director general. On average fewer than 20 countries reported outbreaks in the past five years, but 29 have reported cholera cases since January.

Licensing deal increases access to cancer drug

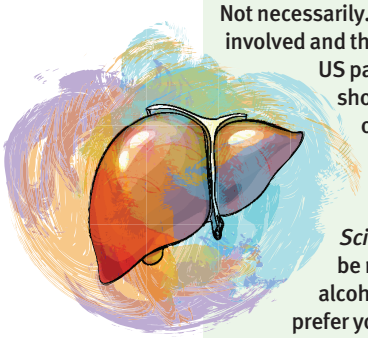
More people in low and middle income countries will get nilotinib to treat chronic myeloid leukaemia under an agreement allowing companies to manufacture a generic version of the drug. The voluntary licensing agreement between Novartis and the Medicines Patent Pool, a UN backed public health organisation, is the first such agreement for a cancer drug. Nilotinib, a second generation tyrosine kinase inhibitor for patients who are resistant or intolerant to the first line treatment imatinib, is on WHO's list of essential medicines for treatment of adults and children over 1 year old with chronic myeloid leukaemia.

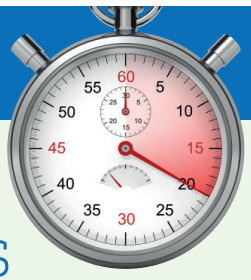
Cite this as: *BMJ* 2022;379:o2546

CLINICAL TRIALS

The number of industry backed clinical trials starting each year in the UK fell by **41%** in 2017-21, leading to a drop in the UK's world ranking for phase 3 industry clinical trials—from fourth place in 2017 to 10th in 2021

[Association of the British Pharmaceutical Industry]





SIXTY SECONDS ON . . . LONGLIFE LIVERS

LIKE THE LETTUCE THAT OUTLIVED LIZ TRUSS AS PM?

Much longer. Researchers have found that transplanted livers can have a very long life: 25 were found to have lasted at least 100 years if their lives in donors and recipients were added up. And 14 are still going.

LONG LIVE THE LIVER!

Indeed. The researchers from the University of Texas Southwestern Medical Center said the oldest liver they found had lasted 108 years. They looked at data from 253 406 liver transplantations in the US between 1990 and 2022 that used organs from deceased donors. The 25 livers that reached the "age of 100" lasted at least a decade in the recipient, as did 60% of the other transplants.

IS TRANSPLANT LONGEVITY NORMAL?

According to NHS Blood and Transplant, most patients survive for more than 10 years after receiving a liver transplant and many live for up to 20 years or more. A kidney from a deceased donor lasts 15 to 20 years. "We do not know of any other types of organ transplants that have lasted 100 years," Christine Hwang, one of the Texas researchers, told *New Scientist* after presenting the study last week.

LIVERLY. ANY CLINICAL RELEVANCE?

A key point is the age of the longlife livers. The donors of those organs were, on average, aged 84 when their organs were harvested. In contrast, many of the livers that didn't last 100 years were at an average age of 38 at death. This runs counter to the conventional wisdom that organs from younger donors lead to more successful transplantations.

SO, OLDER COULD BE BETTER?

Not necessarily. Other factors may be involved and the study only looked at US patients. Still, "This study shows that older livers, from older donors, can function very well in some cases," Yash Kadakia, another Texas researcher, told *New Scientist*. Older organs tend to be more damaged by infections, alcohol, and obesity, so doctors prefer younger ones. If the Texas findings pan out, it could be a reason not to discount older donors—crucial when the need for organs always outstrips availability.

Mun-Keat Looi, *The BMJ*

Cite this as: *BMJ* 2022;379:o2541

CQC warns that staff and patients are at risk from underinvestment

England's health and care system is in "gridlock and unable to operate effectively," the Care Quality Commission has said, warning that services will be further stretched and people placed at greater risk of harm without urgent action to tackle workforce shortages and chronic underinvestment.

"Continuing understaffing in the NHS poses a serious risk to staff and patient safety, both for routine and emergency care, and shortages in social care are even worse," said the regulator after its annual assessment of the state of health and social care in England.

The CQC said large numbers of people were "stuck," whether in hospital, waiting for social care support, in emergency departments, waiting for a hospital bed, or in ambulances outside hospitals.

Only two fifths of people were able to leave hospital when they were ready, contributing to record breaking waits in emergency departments after a decision to admit and dangerous ambulance handover delays. In addition, around half a million people may be waiting for an adult social care assessment, for care or for a direct payment to begin, or for a review of their care.

People were also struggling to access GPs, exacerbating high pressure on urgent, emergency, and dental care. Ian Trenholm, CQC chief executive, said, "There are no quick fixes, but there are steps to be taken now on planning, investment, and workforce that will help to avoid continuing deterioration in people's access to and experience of care."

There are steps to be taken now on planning, investment, and workforce that will help avoid continuing deterioration
Ian Trenholm

Providers struggling

Staff wanted to provide good care but were struggling, and vacancy rates were "alarmingly high," said the CQC. Many providers were "losing the battle" to recruit and retain enough staff with the right skills, because people were drawn to industries with higher pay and less stressful conditions.

In the first three months of this year 2.2 million hours of home care could not be delivered because of insufficient workforce capacity, leading to unmet and under-met needs. Satisfaction with NHS healthcare and with social care had plummeted in 2021-22, the report added.

The CQC voiced "deep concerns" about specific service areas, including maternity services, which it said were "getting worse."

Matthew Limb, London Cite this as: *BMJ* 2022;379:o2537

Standard care could have saved babies in East Kent, says Kirkup report

Suboptimal maternity care at two hospitals in Kent led to death or injury among dozens of babies and mothers and caused "incalculable" damage to families, a damning independent report has concluded.

This cannot go on. We have to address this in a different way
Bill Kirkup

The investigation into maternity services at East Kent Hospitals University NHS Foundation Trust found that 45 babies, in 65 cases examined, might not have died if care had been given to the national standard. With standard care the outcome could have been different in 12 of 17 cases of brain damage, it found. And in cases of maternal injuries and deaths the outcome could have been different with standard care in 23 of 32 cases examined.

The report, commissioned by NHS England and NHS Improvement, outlined how "those responsible for the provision of maternity services failed to ensure the safety of women and babies, leading to repeated suboptimal care and poor outcomes—in many cases disastrous."

A panel led by Bill Kirkup, a public health doctor with a specialty in obstetrics, found a lack of compassion and kindness, "grossly flawed" teamwork, and a trust response "characterised by internal and external denial."

Ahead of the report's publication on 19 October, Kirkup told BBC Radio 4's *Today* programme, "When I reported on Morecambe Bay maternity services in

NHS announces "data driven war rooms" to tackle winter pressures

Control centres open 24 hours a day will be set up across England to oversee demand and capacity across healthcare settings, NHS England has said, as part of its plan to ease winter pressures.

In a media notice it said, "These data-driven war rooms, led by teams of clinicians and experts, will enable rapid decisions to be made to any emerging challenges, including where hospitals can benefit from mutual aid, or to divert ambulances to another nearby hospital with more capacity."

Additional hospital beds will be delivered, including "mothballed beds," while ambulance services have been told to deploy mental health professionals around the clock in emergency centres and on scene.

In a letter sent to trusts and GPs, NHS England said that bed occupancy was still at an all time high and that more than 10 000 clinically ready patients were having to stay in hospital every day because of social care problems blocking discharge.

The letter said, "Over the past few weeks [these problems] have been exacerbated by an increase in the number of covid inpatients and related staff absences. We continue to prepare for the possibility of high prevalence of flu, based on the evidence from other countries and advice from public health experts. We therefore all need to be prepared for things to get even tougher over the coming weeks and months."

"Unwarranted variation"

NHS England has said it will also reduce "unwarranted variation in ambulance conveyance rates."

A clinically led national scheme, the winter improvement collaborative, is also being launched this week to share and scale up local innovations that are found to improve handover delays and response times.

2015 I did not imagine for one moment that I would be back in seven years' time talking about a rather similar set of circumstances and that there would have been another two large, high profile maternity failures as well on top of that.

"This cannot go on. We have to address this in a different way. We can't simply respond to each one as if it's a one-off, as if this is the last time this will happen."

Breaking the cycle

The review found a "culture of tribalism," with teamwork lacking between midwives, obstetricians, paediatricians, and other professionals and instances where this had delayed intervention. Staff did not listen to patients and in some cases blamed them for their own misfortune.

The panel heard the trust's medical directors generally lacked the tools to handle intransigent consultants, and there was an unwillingness to raise concerns formally. The review called for four broad areas of action to tackle shortcomings in care for mothers and babies nationwide (box), after a series of reports on individual NHS trusts found longstanding and systemic failures.

The East Kent trust provides maternity services at Queen Elizabeth the Queen Mother Hospital in Margate and the William Harvey Hospital in Ashford. The review, which covered 2009 to 2020, found that "supposedly one-off catastrophic failures have continued to happen, despite assurances that each would be the last." The trust missed eight opportunities in a series of reports in that period to acknowledge and tackle the problems, the review found.

The trust's chief executive, Tracey Fletcher, apologising "unreservedly" for the harm and suffering caused, said, "We must now learn from and act on this report."

Clare Dyer, *The BMJ* Cite this as: *BMJ* 2022;379:o2520

THE INQUIRY found that **45** babies, of **65** cases examined, might not have died

THE REVIEW PANEL'S RECOMMENDATIONS

- A task force to set valid maternity and neonatal outcome measures, to be mandatory nationally
- Relevant bodies to report on delivering compassionate care and on improving the oversight and direction of clinicians, with nationally agreed standards and sanctions for non-compliance
- Relevant bodies to report on how teamwork in maternity and neonatal care can be improved and on the employment and training of junior doctors
- A bill placing a duty on public bodies not to conceal information from families and other bodies
- A requirement on trusts to review their approach to reputation management and to ensure maternity care representation on their boards
- A requirement for NHS England to reconsider its approach to poorly performing trusts

NHS England emphasised that all elective procedures must go ahead unless there were "clear patient safety reasons" for postponing. Trusts considering cancelling a high proportion of elective care must first discuss this with a regional director.

Hospitals have also been instructed to implement priority actions, including faecal immunochemical testing in the lower gastrointestinal pathway—including for patients on endoscopy waiting lists—and tele-dermatology in the suspected skin cancer pathway. NHS England emphasised the need for "greater prioritisation of diagnostic and surgical capacity for suspected cancer."

Elisabeth Mahase, *The BMJ*
Cite this as: *BMJ* 2022;379:o2515

MARK THOMAS

Doctor faces new charges of wrongfully practising as a GP after GMC wins appeal

A doctor who was cleared by a medical practitioners tribunal is facing a new tribunal after a successful GMC appeal.

The charges relate to attempts by Valentine Udoye, who qualified in Nigeria and worked there as a GP, to achieve the right to practise as a GP in the UK.

He undertook the first year of GP training in Scotland, but his immigration status prevented him from completing the second year. In May 2016 he applied to the GP Induction and Refresher Scheme, then applied to the GMC in September 2016 for a certificate of eligibility for GP registration (CEGPR).

Udoye was offered a six month placement under the scheme, from August 2017, even though he had not previously been on the GP register.

Meanwhile, his application for a CEGPR was refused in April 2017. The GMC charged him with dishonesty in declaring on his induction and refresher registration form that he was a registered GP when he knew he was not, with practising as a GP when he knew he was not eligible, and with making claims for payments arising from a placement he was not entitled to.

"Innocent error"

The original tribunal found there was sufficient evidence that Udoye made an innocent, negligent, or mistaken error when completing the CEGPR form, and on the charge of working as a GP it concluded the GMC was really alleging he was practising as an "independent" GP on the placement, which was not proved because he was working under supervision.

Mr Justice Holgate upheld the appeal in June 2021. He said the tribunal had been "wrongly persuaded" to misinterpret the GMC's allegation, when the language used was "perfectly straightforward and clear."

Holgate held the tribunal's approach was "legally flawed" by not drawing adverse inferences from Udoye's failure to give evidence. He sent the case back to a new tribunal, which started in September and has been adjourned to 27 February.

A petition launched by Nigerian Doctors in the UK on Change.org is calling on the GMC "to stop the witch-hunt of Dr Valentine Udoye."

Clare Dyer, *The BMJ*
Cite this as: *BMJ* 2022;379:o2552

NEWS ANALYSIS

Can SAS doctors help tackle the GP workforce crisis?

The GMC's latest staffing report has prompted discussion about expanding the role of non-training posts. **Gareth Iacobucci** reports

The GMC has warned that a shortage of GPs is putting patients' access to primary care services at risk and has called on the system "to act now to make the most of a changing medical workforce."

In its annual UK workforce report, published last week, the regulator said staffing levels were critically low in numerous specialties but that primary care was facing a particular problem.

How has the workforce changed?
The report said that from 2020 to 2021 the number of licensed doctors in the UK grew by more than 11 000, from 272 255 to 283 663. This growth is being driven by international graduates, who in 2021 outnumbered UK graduates joining the medical workforce (50% versus 39%).

In the five years from 2017 the number of GPs on the UK medical register rose by 7% (table), while consultant numbers rose by 11%. In contrast, doctors on the specialty and associate specialist (SAS) and locally employed (LE) register—a significant proportion of whom came from overseas—have expanded the most, by 40%. If that trend continues, the GMC said, by 2030 this group will be the largest in the register.

What has the GMC proposed?
As a short term solution the GMC has proposed relaxing the rules that ban thousands of skilled doctors in non-training posts from working in general practice. The GMC's chief executive, Charlie Massey, told *The BMJ* that reversing the rule could be implemented quickly.

"SAS and LE doctors are a fantastic resource of experienced and skilled doctors. If, for example, they could use those skills to complement the existing GP workforce, it would begin to address some of the difficulties patients have accessing primary care, without lowering standards," he said.

"If we get this right, we benefit GPs, we could create better career pathways for SAS doctors, and we could improve patient care. Of course, GPs do a very skilled, very specialist role, but surely it shouldn't be beyond us to think in a slightly fresher way."

How have GP leaders reacted?
Martin Marshall, chair of the Royal College of General Practitioners, said any changes must be made "in the best interests of patients and without creating unintended consequences on workload" and that SAS doctors "must not be seen as a replacement for GPs."

He said, "We would need to see more detailed proposals from the GMC."

Alan Stout, co-chair of the BMA's UK GP Committee, said the GMC's idea should "rightly trigger a debate" about how GPs and SAS doctors might work more closely together, but he added, "Policy makers must not overlook the fact that GPs are specialists in their own right, having undergone rigorous training to practise as community based, expert medical generalists."

Policy makers must not overlook the fact that GPs are specialists in their own right Alan Stout

This should not mean employing largely international medical graduates cheaply Ujjwala Mohite

How have SAS doctors reacted?
Representatives said they needed a clearer picture of how the policy would work in practice. Ujjwala Mohite, chair of the BMA's UK SAS Committee, said, "It's unclear what roles SAS doctors would be expected to fulfil, what training they would need to undergo, what support and inductions would be provided, and what terms and conditions they would be working under. Such a plan should not be a case of employing largely international medical graduates cheaply and on poor terms to plug staffing gaps, as we see with many LE doctors."

How has the SAS cohort changed?
The report showed that the number of doctors who joined the UK workforce after qualifying in the European Economic Area has stayed at around 2000 a year since 2015. But there has been a sharp increase in UK nationals joining the workforce with EEA primary medical qualifications in recent years, particularly from central and eastern Europe, many of whom become SAS doctors. The GMC noted that universities in Bulgaria, Romania, the Czech Republic, Poland, and Hungary all have English language medicine programmes, which "reduce the language barriers for international students" and may explain in part the increase in UK nationals with a PMQ from these parts of Europe.

Why are more doctors—and more UK nationals—taking SAS posts?
There is huge competition for specialist training posts. As *The BMJ* reported in July, England had a record number of doctors applying for specialty training programmes this year.

Jamie Read, an associate specialist in geriatric medicine and SAS representative at the Royal College of Physicians, said many doctors were choosing SAS as a positive career option. "From my experience more individuals in training grades have stepped out into SAS doctor roles. It is seen as a much more positive career choice, one that provides greater

NUMBERS OF LICENSED DOCTORS ON UK MEDICAL REGISTER

	2017	2018	2019	2020	2021	% change 2017-2021
GPs	60690	61313	62256	63741	65160	7
Specialists	75282	77257	79041	81838	83513	11
GP and specialist doctors	1241	1241	1249	1295	1289	4
SAS and LE doctors	45578	48199	53432	58760	63740	40
Doctors in training	59851	62200	64342	66621	69961	17
Total	242642	250210	260320	272255	283663	17

JULIAN CLAXTON / ALAMY

flexibility, embraces less than full time working, has an opportunity for development, and also provides stability in not having to move hospital every four or six months."

Is turnover higher among SAS and LE doctors?

Yes. Although this workforce has grown the most in recent years, the GMC data show these doctors are more likely than others to leave medicine after a short period. The GMC forecasts that the medical workforce as a whole will grow by a third by 2030 from the 2021 level if current trends continue. But if the rate of international graduates joining goes back to levels seen before 2017 there will be 23 000 fewer doctors in 2030, it warns.

Why do SAS doctors leave?

GMC research into the career progression of doctors who graduated overseas found that they faced barriers to their career development in the UK. It said, "SAS doctors in particular struggled to find positions compatible with their qualifications. This led to limiting career prospects and a feeling of being 'stuck' with no option to progress into a specialist role."

The GMC's 2021 *Completing the Picture* report showed that there was often no single reason why doctors left UK practice, but dissatisfaction (with their role, place of work, or the NHS) was commonly cited, alongside burnout and work related stress.

Amit Kochhar, deputy chair of the BMA international committee, said, "In our own report, *Why Are We Still Here?* from earlier this year we found that IMG doctors were more likely than UK-born participants to talk about experiencing overt discrimination. Participants also suggested that perceptions around the 'professionalism' of IMG doctors are shaped by cultural perspectives and biases. These experiences had led many to disengage. Any discussion of retention could start there."

How does the GMC think SAS doctors' progression can improve?

As the regulator of medical education, the GMC said it was "actively involved in conversations" about whether training pathways needed to be adapted so that they didn't relate only to those doctors who wanted to become consultants or GPs. Upcoming legislative change "will provide us with more flexibility and autonomy in designing less intensive ways of recognising SAS doctors' skills, enabling them to join the GP or specialist registers," it added.

Beyond this, the GMC said employers must "ensure support for all doctors to progress and develop through their careers" and make workplaces "more inclusive, compassionate, and supportive."

Kochhar said the GMC's report did not say enough about what the opportunities were. "It is a shame that such a troubling workforce issue on which there is much good work being done got so little space in such a major report," he said.

What else could help?

Read said the poor support often provided to SAS and LE doctors may be due to a lack of distinction between their differences. "It's not a homogenous group," he said. "There has perhaps not been enough recognition of needing to provide more targeted and bespoke support around continuing professional development, and career progression.

"Within the Royal College of Physicians we are trying to draw a distinction between the SAS and the LE group, because our feeling is they require very different types of support."

Gareth Iacobucci, *The BMJ*

Cite this as: *BMJ* 2022;379:o2531

Restore primary care's doctor-patient relationship, say MPs

General practices should measure and report on continuity of patient care as a way to repair damage done to the doctor-patient relationship, MPs on the House of Commons Health and Social Care Committee have said.

In a report on the future of general practice they warned that the profession was demoralised, GPs were leaving almost as fast as new ones could be recruited, and patients were unhappy with access to care. The root of the trouble, they said, was that there were not enough GPs to meet demand, coupled with cases becoming more complex and falling numbers of qualified, full time equivalent GPs working in the NHS.

A key theme of the report was the need to restore the doctor-patient relationship. "Seeing your GP should not be like booking an Uber driver who you will never see again. Relationship-based care is essential for patient safety and experience," it said. Since 2004 most GPs have not had (personal) individual lists of patients, and growing pressure has made it less likely that patients will see the same doctor regularly, said the report. To restore that relationship, MPs recommended that NHS England introduce a national measure of continuity of care to be reported by all general practices by 2024 and to re-implement personal lists in the GP contract from 2030.

Committee member Rachael Maskell, a Labour MP, said, "Our inquiry has heard time and again the benefits of continuity of care to a patient, with evidence linking it to reduced mortality and emergency admissions. Yet that important relationship is in decline. We find it unacceptable that this, one of the defining standards of general practice, has been allowed to erode."

Supporting many of the MPs' recommendations, Farah Jameel (below), chair of the BMA's England GP Committee, said, "Continuity of care is what patients want, what keeps people well, and what reduces health costs."

A Department of Health and Social Care spokesperson said that, from December, cloud based telephony systems would make it easier for patients to contact their general practice and get to the right place for help. They added, "There are nearly 1500 more full time equivalent doctors working in general practice now than in 2019, and we are spending at least £1.5bn to create 50 million more appointments by 2024."

Adrian O'Dowd, London

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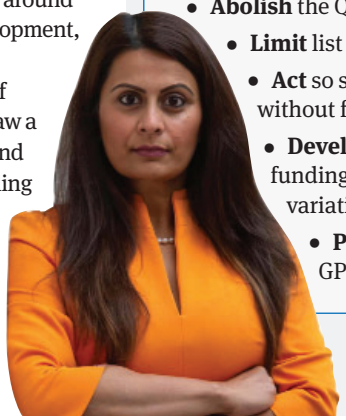
THE MPS' KEY RECOMMENDATIONS

- **Abolish** the Quality and Outcomes Framework
- **Limit** list sizes to 1850 within five years
- **Act** so senior doctors can continue to work without facing large pension tax bills
- **Develop** a better mechanism to award funding to deprived areas to tackle the variation in GP shortages, and
- **Provide** funds to create 1000 extra GP training places a year.



THE BIG PICTURE

Activists demand more funds for ME research

Demonstrators in Parliament Square last week called for hundreds of millions of pounds missing from myalgic encephalomyelitis research to be restored to the condition.

The campaigners, including Alex Chalk (above) and many other MPs, illustrated ME's connections to other chronic illnesses by linking themselves with red threads. The demonstration also heard from expert speakers, who discussed their research work and the intersection between ME and long covid.

One of the speakers, Douglas Kell, a professor at Liverpool University, said, "If adequate research funds had been invested in ME research in previous decades, as people with ME have asked for, we would have been in a much better position to help people with long covid."

One of the organisers of the event, Denise Spreag of #MEAction UK, said, "We are asking all our supporters, people with ME, and people with other complex chronic conditions to start this campaign by lobbying the Wellcome Trust—which has approximately £29bn of funds—to commit significant funding to ME. It has been neglected, ignored, and stigmatised for far too long."

Spreag said that studies had shown that up to 80% of cases of ME were associated with infection with viruses ranging from influenza and Epstein Barr (glandular fever) to Ebola.

Alison Shepherd, *The BMJ*

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TAKENBYTARA

EDITORIAL

Homicide in pregnant women in the US

Shocking situation linked to lethal combination of intimate partner violence and firearms

Women in the US are more likely to be murdered during pregnancy or soon after childbirth than to die from the three leading obstetric causes of maternal mortality (hypertensive disorders, haemorrhage, or sepsis).[1] These pregnancy associated homicides are preventable, and most are linked to the lethal combination of intimate partner violence and firearms.[2] Preventing men's violence towards women, including gun violence, could save the lives of hundreds of women and their unborn children in the US every year.[1-4]

Intimate partner violence is prevalent worldwide, with one in three women reporting experiences of physical, sexual, or psychological abuse by a partner in their lifetime.[5 6] Reports suggest the US has a higher prevalence of intimate partner violence than other high income countries, including most European countries and Australia.[7] Intimate partner violence is often fatal.[8] In the US, most intimate partner deaths involve firearms,[3] and recent estimates indicate that firearms were used in 68% of women killed by partners around pregnancy between 2008 and 2019.[2] With numbers of firearm homicides increasing in the US,[9] gun violence has become a health emergency for pregnant women.

When firearms are used in domestic homicides, the risk of injury or death to additional family members or others also increases.[11] Rates of domestic homicides are associated with state level rates of gun ownership and firearms legislation.[3] Recent legislation to further prevent firearm purchases by current or former dating partners with convictions for domestic violence is a step in the right direction.[12] But further restrictions and enforcement of current firearms legislation are needed urgently. Few perpetrators of intimate partner violence are ever convicted, and many loopholes allowing access to firearms remain.[12 13]

Research to identify risk factors for homicide in pregnancy is critical to prevention

Rebecca B Lawn, postdoctoral research fellow, Department of Epidemiology, Harvard T H Chan School of Public Health, Boston
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Karestan C Koenen, professor of psychiatric epidemiology, Massachusetts General Hospital, Boston

Opportunities for intervention

The recent dismantling of women's reproductive rights in the US brings further urgency to these issues.[14] Reproductive coercion, a common aspect of intimate partner violence, increases the risk of unintended pregnancy.[15] Restricting access to abortion endangers women because unwanted pregnancies potentially amplify risks in abusive relationships. Black women are at substantially higher risk of being killed by partners around pregnancy than white or Hispanic women.[16] Contributing factors include longstanding socioeconomic oppression, structural racism, inequities in access to and quality of reproductive healthcare, and being disproportionately affected by recent changes to abortion legislation.[16] Restricting women's access to reproductive care, including abortion, also limits opportunities for services to identify and help women experiencing gender based violence.

In addition to injuries or death, intimate partner violence has been associated with chronic physical and mental health conditions, including diabetes.[17] Pregnancy typically increases women's interactions with healthcare providers, presenting opportunities for screening or other approaches to help women experiencing, or at risk of, violence. Alternative approaches include universal education whereby all patients, not just those who disclose, are provided with information on the prevalence and health consequences of intimate partner violence as well as the availability of help.[18]

Such interventions may help stop a pattern of abuse that could lead to death or adverse health outcomes. However, these efforts must sit alongside urgent work to reduce all forms of violence against women.[12]

Research to identify risk factors for homicide in pregnancy is critical to prevention. However, better quality data are needed for further analyses: recent studies have been limited by large amounts of missing data on the pregnancy status of women who have been killed.[2] Detail on relationships and patterns of abuse leading to homicide during pregnancy and in the postpartum period is also minimal in large datasets.[1 8] Likely reasons include poor communication between organisations, such as police and mortuary information systems, and the withholding of details about the victim-offender relationship until police cases investigations are completed.[8]

All causes of maternal mortality are important. The tragedy is that pregnancy associated homicide is one of the preventable causes of maternal death. Ending male violence against women, including gun violence, is an urgent priority for the health and safety of women everywhere.

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Find the full version with references at http://dx.doi.org/10.1136/bmj.o2499

EDITORIAL

COP27 climate change conference

Wealthy nations must provide support for Africa and vulnerable countries

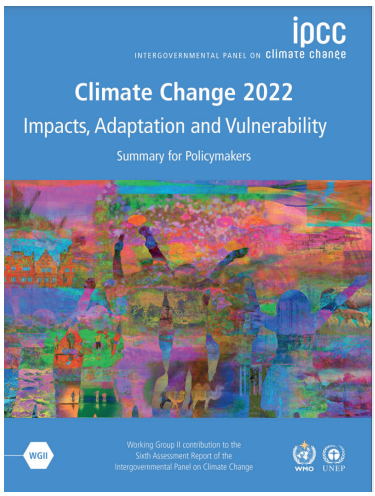
The 2022 report of the Intergovernmental Panel on Climate Change (IPCC) paints a dark picture of the future of life on Earth, characterised by ecosystem collapse, species extinction, and climate hazards such as heatwaves and floods.[1]

While the Paris Agreement of 2015 outlines a global action framework that incorporates providing climate finance to developing countries, this support has yet to materialise.[2] COP27 is the fifth conference of the parties to be organised in Africa since its inception in 1995. Ahead of this meeting, we—as health journal editors from across the continent—call for urgent action to ensure it is the COP that finally delivers climate justice for Africa and vulnerable countries. This is essential not just for the health of those countries but for the health of the whole world.

The climate crisis has had an impact on the environmental and social determinants of health across Africa, leading to devastating health effects.[3] Impacts on health can result directly from environmental shocks and indirectly through socially mediated effects.[4]

Droughts in sub-Saharan Africa have tripled between 1970-79 and 2010-19.[6] In 2018, devastating cyclones affected 2.2 million people in Malawi, Mozambique, and Zimbabwe.[6] In west and central Africa, severe flooding resulted in mortality and forced migration from loss of shelter, cultivated land, and livestock.[7] Changes in vector ecology brought about by floods and damage to environmental hygiene have led to increases in diseases across sub-Saharan Africa, with rises in malaria, dengue fever, Lassa fever, Rift Valley fever, Lyme disease, Ebola virus, West Nile virus, and other infections.[8 9] Rising sea levels reduce water quality, leading to waterborne diseases, including diarrhoeal diseases, a leading cause of mortality in Africa.[8] Extreme weather damages water and food supply, increasing food insecurity and malnutrition, which causes 1.7 million deaths annually in Africa.[10] In all, it is estimated that the climate crisis has destroyed a fifth of the gross domestic product (GDP) of the countries most vulnerable to climate shocks.[13]

Africa is united with other frontline regions in urging wealthy nations to finally step up



All hands are needed on deck

Yet it is not just for moral reasons that all nations should be concerned for Africa. The acute and chronic impacts of the climate crisis create problems like poverty, infectious disease, forced migration, and conflict that spread through globalised systems.[6 15] These knock-on impacts affect all nations. Covid-19 served as a wake-up call to these global dynamics and it is no coincidence that health professionals have been active in identifying and responding to the consequences of growing systemic risks to health. But the lessons of the covid-19 pandemic should not be limited to pandemic risk.[16 17] Instead, it is imperative that the suffering of frontline nations, including those in Africa, be the core consideration at COP27: in an interconnected world, leaving countries to the mercy of environmental shocks creates instability that has severe consequences for all nations.

The primary focus of climate summits remains to rapidly reduce emissions so that global temperature rises are kept to below 1.5°C. This will limit the harm. But, for Africa and other vulnerable regions, this harm is already severe. Achieving the promised target of providing $100bn of climate finance a year is now globally critical if we are to forestall the systemic risks of leaving societies in crisis. This can be done by ensuring these resources focus on increasing resilience to the existing and inevitable future impacts of the climate crisis, as well as on supporting vulnerable nations to reduce their greenhouse gas emissions: a parity of esteem between adaptation and mitigation. These resources should come through grants not loans and be urgently scaled up before the current review period of 2025.

Some progress has been made on adaptation in Africa and around the world, including early warning systems and infrastructure to defend against extremes. But frontline nations are not compensated for impacts from a crisis they did not cause. Not only is this unfair but it also drives the spiral of global destabilisation, as nations pour money into responding to disasters but can no longer afford to pay for greater resilience or to reduce the root problem through emissions reductions. A financing facility for loss and damage must now be introduced, providing additional resources beyond those given for mitigation and adaptation.

Africa is united with other frontline regions in urging wealthy nations to finally step up, if for no other reason than that the crises in Africa will sooner rather than later spread and engulf all corners of the globe, by which time it may be too late to effectively respond. If so far they have failed to be persuaded by moral arguments, then hopefully their self-interest will now prevail.

On behalf of all authors: Lukoye Atwoli, editor in chief, *East African Medical Journal*
See bmj.com for full author details.

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This comment is being published simultaneously in many journals. For the full list of journals see: www.bmj.com/content/full-list-authors-and-signatories-climate-emergency-editorial-october-2022

BMJ INVESTIGATION

As direct-to-consumer testing increases experts fear the NHS is paying the price

Dozens of companies are offering private tests for a range of health conditions and deficiencies to British patients, with some making claims that exceed the evidence base. Now there are calls for tighter regulation to protect patients. **Emma Wilkinson** reports

"Take your health into your hands today," reads an advertisement for the Livit app, from Nightingale Health. Costing €179 (£155), it encourages four blood tests a year, using "highly advanced blood analysis technology," and promises to predict how many healthy years of life a person has left.

The market for direct-to-consumer tests such as Livit is booming, with one piece of market research predicting that the global blood testing market will rise by 60% from around $80.50bn in 2021 to $128.45bn in 2028. Experts are concerned that such companies are making misleading claims and leaving an already overworked NHS to follow up "abnormal results." Some have also warned of a lack of regulation to ensure that consumers truly know what test results mean.

The BMJ's investigation has led us to refer two companies to the UK Advertising Standards Authority for misleading claims about the accuracy or detection rates associated with at-home tests. Another removed tests from its website after we got in touch. But in many cases it is the absence of information that is the problem, says Chris Salisbury, professor of primary healthcare at the University of Bristol.

"There is a simplistic assumption that more information is better, so why shouldn't you get the tests done? Yet they're making claims without showing any of the disadvantages," he says.

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GENETIC SCREENING TESTS OFFERED WITHOUT COUNSELLING

One company removed a series of genetic screening tests from its website after *The BMJ*'s investigation.

MeCheck offered eight different genetic cancer risk screening kits costing between £300 and £800, but this concerned University of Bristol primary healthcare professor Chris Salisbury, because no counselling was offered alongside the tests to explain the implications of the results for the patient. MeCheck, run by Biox Medical, removed five of the eight tests from its website when contacted by *The BMJ*, saying that it was no longer interested in providing them to consumers.

MeCheck also sold non-invasive prenatal screening for a wide range of chromosomal abnormalities, until the tests were removed after it was contacted by *The BMJ* about the claims on its website. Such screening for Down's syndrome, Edwards' syndrome, and Patau's syndrome was rolled out on the NHS last year for women at high risk, but there are questions over the accuracy of this type of screening beyond these three, including for sex chromosome aneuploidies and "microdeletions," and monogenic disorders, explains Lyn Chitty, professor of genetics and fetal medicine at Great Ormond Street Hospital in London.

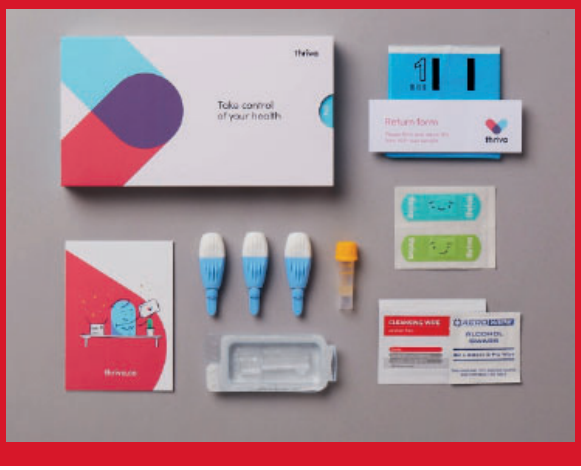
Women may be forced into decisions about healthy pregnancies because of misleading test results and may not understand what is being tested for or that these are not diagnostic tests, she warns. The diagnostic tests that would then be needed are also associated with a risk of harm and involve difficult and emotional decisions.

For one test sold by MeCheck, the PrenatalSafe Complete Plus kit, the site had claimed that it "has a sensitivity and specificity higher than 99% with a very low incidence of false positives" and for fetal chromosomal abnormalities it had a detection rate "very similar" to that obtained by invasive prenatal diagnostic techniques.

Women may be forced into decisions because of misleading test results

The Advertising Standards Authority said there were specific rules concerning advertising for non-invasive prenatal screening tests that included the need to have clear explanations of any detection rate figures and not to use the word "diagnostic."

My Baby Company also offers a variety of these tests and states "all of our NIPT tests have an accuracy rate of >99%." *The BMJ* put this claim through the advertising authority's complaints process, which called it a "clear problem" and passed the details to its compliance team. *The BMJ* contacted My Baby Company but did not receive a response.



Boom in home testing

In the UK there are now dozens of companies like Nightingale offering home testing kits for health screening for a range of conditions and deficiencies. Consumers are promised that such tests will help them take control of their health and spot problems early. Examples include Medichecks, which offers 250 tests of 450 biomarkers, with results uploaded to a personal dashboard. It includes the tiredness and fatigue finger prick test that measures iron, thyroid hormones, vitamin levels, and inflammation.

Numan promotes its "fear nothing blood test" at £128 for a screen of up to 21 biomarkers, with the option of a full refund if users' results fall within the normal range. But test results will lie outside the normal reference range in 5% of cases, says Bernie Croal, president of the Association for Clinical Biochemistry and Laboratory Medicine. "So if I do 100 tests on you and there's nothing wrong with you, five of your tests will be abnormal," he points out.

Numan offers a quarterly subscription for tests of cholesterol and HbA_{1c}, thyroid hormones, kidney and liver function, testosterone, vitamins D and B_{12}, folates and ferritin. However, in the case of vitamin D deficiency, if the patient has no clinical signs or symptoms the advice is not to retest at all, says national guidance on minimum retesting intervals, last updated in 2021.

For low risk patients the advice is to carry out lipid checks every three years, and even for higher risk patients or those on stable treatment only annual testing is recommended. Numan did not respond to *The BMJ*'s request for comment.

They make claims without showing any disadvantages
Chris Salisbury

Many people coming to us have trouble accessing NHS services
Sam Rodgers

Private companies offering tests include (above from left) Nightingale Health, Thriva, Medichecks, and Numan (right)

Some high street checks are not recommended "because it is not clear the benefits outweigh the harms"

The UK National Screening Committee has well defined criteria for assessing whether screening is worth while that have been in place for decades. These include whether the condition being screened for is an important health problem, that there is a detectable early stage, and that the physical and psychological risks are outweighed by the benefits. A committee spokesperson said that screening tests were not for people with symptoms. In addition, NHS screening programmes offer care or treatment for people who need it.

Some of the health checks from high street companies are not recommended by the National Screening Committee "because it is not clear that the benefits outweigh the harms," the spokesperson added.

More work for GPs

Most testing companies, such as Thriva and the Dublin based Lets Get Checked, send a clinician reviewed report to the patient. Some, including Numan, offer a GP consultation for an extra fee. Croal says, "Most of the online [tests] will send the results to the patient with at best a sort of asterisk next to abnormal ones, with advice to either pay some more money to get some sort of health professional to speak about it or go and see your own GP.

"That is coming in when primary care is so stretched, and it will just create a lot of work."

Another testing boom that was recently highlighted in an NHS England bulletin to GPs was for privately purchased human papillomavirus tests, which cannot be acted on by the NHS Cervical Screening Programme or entered into the patient record.

In 2019 the Royal College of General Practitioners published a position statement about private health screening, warning that "the organisation initiating the screening should not assume that GPs will deal with the results." This puts GPs in a very difficult position, says Ben Lees, a GP in Cheltenham, as they see patients coming in "clutching the results of private screening tests" that are not indicated or ones that they would not have done.

In addition to the risk of false positive results, which may lead to a catalogue of unnecessary and potentially invasive tests and anxiety for the patient, things may be missed, says Jessica Watson, a GP in Bristol who also researches the rational use of testing in primary

Seth Rankin (left), cofounder of London Medical Laboratory (right) says he believes in "democratising healthcare"

care. "There's the risk a patient is falsely reassured because they're told there's nothing wrong, but they haven't had the right test and they then delay seeking help."

Variation in information

However, the companies selling tests believe there is a role for private testing in the health ecosystem. Sam Rodgers, a practising GP in southeast London and chief medical officer at Medichecks, points out that the company has been operating for 21 years and that clinical governance has always been important to it. "Many customers come to us either because they are having trouble accessing NHS services or because the NHS does not provide the service they are looking for," he says. People are directed to their GP after its testing in about 7% of cases, he says, adding that the company had chosen not to provide a subscription service as they don't believe it to be "clinically appropriate."

A spokesperson for Nightingale said its tests were for "prediction and prevention rather than diagnosis or treatment" and it didn't provide test results as such but overall risk information and lifestyle guidance. Randox also responded to say that its testing service was "complementary to, and supportive of, the work of the NHS at a time it is under unprecedented pressure."

Yet it is clear there is wide variation in the amount and accuracy of information provided to consumers when purchasing tests online. Under the national prostate cancer risk management programme, PSA testing is available on the NHS for asymptomatic men over the age of 50, after a discussion with a GP about the risks and benefits. Yet private tests are easily available with no age recommendation at all, including from Optimale and the London Medical Laboratory. The Health Check Shop also advertised PSA testing with no age recommendation and said the test had an accuracy of more than 96%, contradicting official advice of the chance of both false positives and negatives, until it was contacted by *The BMJ* and changed its website.

John Rees, director of JR Biomedical, the clinical diagnostics company behind the Health Check Shop, says the figures quoted for the PSA test on the website were provided by the manufacturer, which itself is subject to regulatory requirements.

Private tests promoted by NHS endorsed app

When using the NHS endorsed Patient Access app to book an appointment with his own GP, Salisbury was shocked to see an ad for a general health screen, which after a few clicks took him to the London Medical Laboratory, which offers a variety of home testing kits, including for tiredness and fatigue, and a prostate profile. The general health profile being promoted costs £79 and tests 27 biomarkers. EMIS, the healthcare IT company behind the app, says it has 14 million users.

"It first says this is in partnership with the NHS, then it says, 'Would you like to have some blood tests?' It's only when you click through you realise it's private testing. This is the NHS being seen to promote something that the NHS positively discourages."

All private services on Patient Access have been thoroughly reviewed
Shaun O'Hanlon

There are "ethical questions" about NHS labs offering private tests
Bernie Croal

London Medical Laboratory recommends that users of its health test contact their GP "for a full interpretation of the results."

London Medical Laboratory's cofounder and chief executive, Seth Rankin, who has also worked as an NHS GP, told *The BMJ* that he strongly believes in "democratising healthcare," because there are around one million people with undiagnosed type 2 diabetes and countless asymptomatic people with high cholesterol concentrations, thyroid disorders, and vitamin D deficiency. "It must surely be only a tiny minority of the most reactionary GPs that would wish to deny our increasingly educated population access to something as valuable to their health as a blood test," he says.

Shaun O'Hanlon, EMIS Group's chief medical officer, says that all private provider testing services listed on Patient Access have been selected after a thorough review by the clinical team, which includes UK GPs. An NHS Digital spokesperson says that services offered through third party apps or websites connected to the NHS login service are the responsibility of the companies providing them.

Some NHS laboratories also offer a small amount of private testing. Monitor My Health is a venture from the Royal Devon University

Healthcare NHS Foundation Trust, with, it says, money raised from its home diabetes, vitamin D, cholesterol, and thyroid screening tests going back into the NHS. The NHS Black Country Pathology Services also offers vitamin D testing directly to the public, with packs of 50 available. Croal says there are "ethical questions" about NHS laboratories offering private tests. Both laboratories declined to comment when contacted by *The BMJ*.

Regulation

Croal would like to see better regulation of direct-to-consumer tests. The Care Quality Commission in theory oversees services in England that perform tests and analysis, but marketing, consumer outreach, and the sending of home kits are all outside its remit. Some laboratories are accredited to the UK Accreditation Service, but this is voluntary.

The Advertising Standards Authority does investigate misleading claims, should a complaint be made. An authority spokesperson said it had received just under 250 complaints about health screening advertisements and acted on 52. Nine were formally investigated, and four rulings were upheld. Another 21 resulted in informal investigations, and 22 advertisers received advice.

Croal says the Royal College of Pathologists, Association for Clinical Biochemistry and Laboratory Medicine, and other stakeholders are in the process of drafting a consensus statement on private tests "to put a marker in the sand."

Salisbury says the NHS needs clearer guidelines on what staff should be expected to do after patients have opted for private tests. He adds, "I think the advertising could be regulated much better so companies have to tell you about the harms as well as the benefits."

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OPINION

Margaret McCartney, Jessica Watson, Brian Finney, and Chris Salisbury

Why blood testing companies need effective regulation

Without proper oversight these tests will harm patients and the NHS

In the UK, regulation prevents prescription only medications being advertised directly to consumers, but not medical tests. The boom in home screening tests is a concern.

Symptomatic testing should begin not with pick and mix blood testing but with history taking, possible examination, and decisions on whether any test is necessary and beneficial. Pre-test probabilities are required to interpret and plan action on the basis of the test results. Patients should be informed that "normal" results may not provide complete reassurance or predict an outcome and that if they are experiencing ongoing symptoms they should seek appropriate healthcare. Conversely, apparently "abnormal" blood test results can cause patients undue stress and result in them seeking unnecessary healthcare.

Claims made by companies for screening often exceed the evidence base. One company cited in *The BMJ*'s investigation offered a refund if none of the screening tests fell outside "normal" ranges. Given that reference ranges are conventionally defined as the range that encompasses 95% of the "normal" population, few people will have no "abnormal" results when multiple biomarkers are tested.

In asymptomatic patients with low pre-test probability of disease the risk of false positives will be high, whereas risk of disease will be low, leading to low positive predictive values. Fully informed consent requires patients to receive a full explanation of the risk of false positives, retesting and associated anxiety, and the cost and time required to take the tests. In the UK the National Screening Committee and NICE use rigorous criteria to appraise screening tests. Few tests are recommended for screening.

Patients often ask NHS GPs to review the results of blood tests that may be of uncertain quality and liable to give false positive results, with follow-up consuming GPs' and NHS laboratory time. The testing companies, meanwhile, may take no responsibility for management of results or the costs of subsequent investigations.

CQC should be empowered to appraise apps that promote private screening, as well as the companies

What should, and could, be done? People have a right to spend their money how they wish, but regulators should protect the public from unfair practices. The NHS needs to explain robustly the criteria for high quality screening and testing and to explain to consumers when they should be sceptical and what they should question. The NHS is a valuable and trusted brand: the NHS logo should be allowed only on apps that meet quality criteria, including not promoting screening or other activities that the NHS itself advises against.

The NHS Choices website should provide advice from the UK National Screening Committee on private blood testing. This could be strengthened by citing cases where the Advertising Standards Authority has upheld complaints. The Care Quality Commission should be empowered to appraise apps that promote private screening, as well as the screening companies themselves, and the existing CQC mandate to assess the effectiveness of services should include the evidence base for screening tests.

Guidance on mixing NHS and private care is now more than a decade old and does not reflect the new reality of patients who may dip in and out of private healthcare use. This guidance needs updating to draw clear lines as to where NHS care should start and end.

Unless clear regulation is undertaken, we predict more poor quality, overhyped testing with harms to individuals and unnecessary costs for the NHS.

Margaret McCartney, honorary senior lecturer University of St Andrews

Jessica Watson, GP and academic clinical lecturer, Centre for Academic Primary Care, University of Bristol

Brian Finney, layperson

Chris Salisbury, professor of primary healthcare, Centre for Academic Primary Care, University of Bristol

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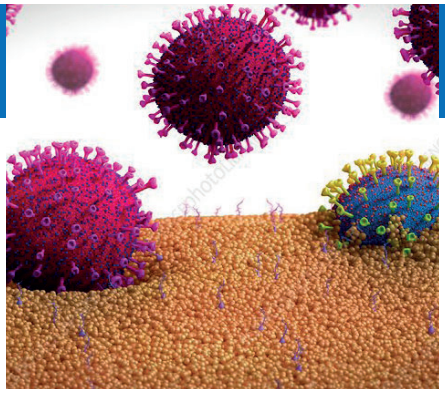
Is covid getting milder?

The BMJ asks the experts that if deaths and hospital admissions are falling does it mean the disease is now less severe



Is covid-19 really getting milder?

The short answer is no. Covid-19 is still a deadly disease, having killed almost 1.1 million people in 2022 at the time of writing. There remains a high risk of hospital admission and death for anyone without prior immunity. With some populations still largely unexposed to the virus, such as in China, and variation in the types of vaccines used, it would be cavalier to call covid-19 anything but serious.

"It's really hard to compare the severe disease aspects of [variants] because the immunity of our population is so different," says Steve Griffin, associate professor at the University of Leeds. "When people call omicron mild, yes, there's probably a lesser tendency for it to go deep in the lungs. But if you think about the clinical impact of it, because of its massive prevalence, even though it's got a lower chance of causing the sorts of severe disease we're talking about with acute covid-19, the actual clinical impact is still very, very marked."

David Strain, senior clinical lecturer at the University of Exeter Medical School, points out that covid-19 tends to make other diseases worse. "It doesn't matter what those other diseases are," he told *The BMJ* in August 2022. "Patients who've got longstanding Crohn's disease are coming in with exacerbations of their Crohn's or their coeliac or their arthritis."

Monica Verduzco Gutierrez, professor and chair of the Department of Rehabilitation Medicine at the Long School of Medicine in San Antonio, Texas, also emphasises that even mild covid-19 could cause long covid, with lingering symptoms and debility.

She adds that we've yet to fully understand the impact of reinfections. A study of the health records of six million people held by the US Department of Veterans Affairs, released as a preprint in June, suggested that people who had a second or third infection had considerably higher rates of heart disease, kidney disorders, and other health problems during the first 30 days of infection, as well as in the months that followed, than people who had been infected only once.

Why does it seem to be getting milder?

The evolution of the virus, as well as the increased immunity of general populations, means that presented symptoms and the frequency of symptoms in many places are shifting, with deaths and hospital admissions falling in countries such as the UK over the course of 2022.

Gutierrez says, "The original strain had more disabling impacts in regard to post-covid conditions because so many more people had severe disease." It's understandable why, to some people, acute covid appears to have become milder in its effects, especially in vaccinated people. But, as detailed above, that doesn't mean that the disease itself is getting any milder.

A paper published in *The BMJ* in August showed that disease caused by the early omicron variants (BA.1 and BA.2) seemed to be less severe in these terms than delta. And the World Health Organization has suggested that the omicron variants' tendency to target the upper part of the body—which also helps its transmissibility—could correlate with fewer cases of severe pneumonia, since it isn't infecting cells deeper in the lungs.

"There is a tension, but overall the virus is winning" Eric Topol

Do different variants cause different severity of disease?

Emma Thomson, professor of infectious diseases at the University of Glasgow, told a Royal Society of Medicine event in August, "Alpha was more severe than the original lineages that entered the UK, and then delta was more severe than alpha. Omicron has taken a dive in severity, but we know that it doesn't take much for the virus to change. By random mutation, it may well be the situation that we get a variant which is more severe."

Eric Topol, professor of molecular medicine at the Scripps Research Institute in California, says that there's a tension between the virus becoming more transmissible and fitter and our immune response getting slightly stronger, but "overall, the virus is winning."

Griffin is similarly worried about the virus's ability to change at a dramatic rate. "You've got a really well adapted virus, and it has [decided], 'That's not good enough.' So it's jumping up to what we might call another fitness peak. These are exquisitely antibody evasive viruses, and they are changing at a tremendous rate."

Strain says that, with the early omicron variant BA.2, "the [acute] covid itself wasn't that bad. But the long covid was much worse." Anecdotally, he says, about 15-20% of his hospital's staff were left with fatigue after infection with BA.2, and many were still on phased return months later. This has reduced since BA.4 and BA.5 have dominated infections.

Is long covid the real worry?

Yes, says Griffin, describing the still high levels of virus circulating as "a real worry." He adds, "I don't think we should just pretend that prevalence doesn't matter. And that's why I really quite strongly disagree with the 'living with covid' strategy. I think it's fundamentally wrong. It's disregarding vulnerable people. It's disregarding long covid."

A report issued in July by the UK's Institute for Fiscal Studies estimates that one in 10 people who develop long covid stop working, generally going on sick leave rather than losing their jobs altogether. The report suggests that, as long as the prevalence and severity of covid remain at current levels, the aggregate impact is equivalent to 110 000 workers being off sick.

"We're breeding long covid with all of this," says Topol. "It's really unfortunate that we've seen this response, which is to just let it rip. It's not acceptable.

"The ability to get ahead of the virus will save us inordinate amounts of cost later."

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