this week

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JEFF DALTON / ALAMY

LETBY DOCTOR: **I should've acted sooner**

The consultant paediatrician whose evidence helped convict nurse Lucy Letby of murdering newborn babies has told the public inquiry into her crimes he and his colleagues should have gone to the police much sooner instead of waiting for permission from managers.

Ravi Jayaram, clinical director for children's services at the Countess of Chester Hospital NHS Foundation Trust, told the Thirlwall inquiry, "Looking back, we shouldn't have had to have waited for permission to go to the police. We should have just gone."

Letby is serving life in prison without the possibility of parole after being convicted of murdering seven babies and attempting to murder another seven between June 2015 and June 2016. Police were not called until May 2017.

Jayaram said consultants first became concerned that Letby could be causing "inadvertent or even deliberate harm" in November 2015. He told the inquiry of an occasion in February 2016 when he was sitting outside writing up notes when a nurse left the room and he "felt uncomfortable" knowing Letby was alone with the premature baby. When he entered, he said, he found the baby was deteriorating and the endotracheal tube was dislodged, but Letby was not responding. He intervened and the baby was successfully resuscitated. "I will take this with me to my grave," he said.

He said that he had been asked why he had not notified someone and that he still lay awake thinking about it. "It is the fear of not being believed, it is the fear of ridicule, it is the fear of accusations of bullying."

Letby was the only nurse on duty for all the incidents, and consultants pressed managers for months to involve the police. She was removed from the neonatal unit and given an administrative post in July 2016, after which the deaths stopped. But she registered a grievance two months later, accusing the consultants of bullying, and managers made them apologise, after threats by her parents to report them to the GMC.

Management was proposing to allow Letby back to clinical work and arranged a mediation meeting. In the event, she did not return and Letby was arrested in July 2018.

Asked about lessons, Jayaram said, "I think if the death is unexplained absolutely the SUDiC [sudden unexpected death in infancy and childhood] process should be involved, because it's quite clear had we done this we would have had oversight from other agencies outside the hospital."

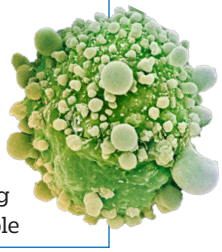
Clare Dyer, *The BMJ*

Cite this as: *BMJ* 2024;387:q2540

Ravi Jayaram, a consultant paediatrician at Countess of Chester Hospital, gave evidence to the public inquiry into the Lucy Letby case

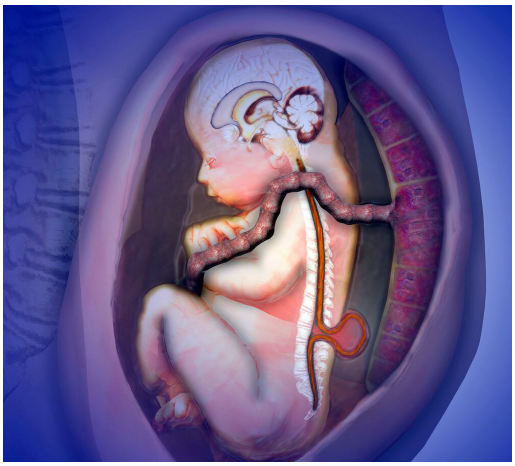
LATEST ONLINE

- Government announces review of scope and safety of role of physician associates
- Gynaecologist is struck off for sexual harassment of colleague who was his patient
- Pancreatic cancer: Researchers challenge reports of increase in cases among young people



SEVEN DAYS IN

Flour will be fortified with folic acid to protect against birth defects



The government is to press ahead with adding folic acid to flour to try to prevent hundreds of babies each year from being born with neural tube defects.

New legislation for England introduced on 14 November will require millers and flour producers to fortify non-wholemeal wheat flour with 250 µg of folic acid per 100 g of flour from the end of 2026. Wales, Scotland, and Northern Ireland will introduce their own laws.

In the UK, flour is already fortified with calcium, niacin, thiamine, and iron. Adding folic acid will reduce the overall number of neural tube defects by around 20% (around 200 cases) in the UK and improve the health of pregnant women, ministers said.

The government also estimates that over the next decade the move will deliver savings of around £20m to the NHS and boost the economy by over £90m through increased participation in the jobs market and fewer parents leaving employment.

NHS England said women should continue to take folic acid supplements for around three months before getting pregnant and for at least 12 weeks after to ensure a higher baseline intake of folic acid. It said that around half of all UK pregnancies were unplanned and that the new regulations would offer greater protection to babies "in all scenarios."

Gareth Iacobucci, *The BMJ* Cite this as: *BMJ* 2024;387:q2531

Covid-19

NHS staff felt strain of supporting patients

NHS staff felt the "strain and trauma" of having to look after patients with covid-19 whose relatives could not be there to offer support, NHS England's medical director told the UK's covid inquiry. Stephen Powis spoke on 11 November about the effects of the pandemic on healthcare workers and said that, nearly five years since the start of the pandemic, staff were "still struggling and remembering the impact of those waves and the moral injury that we know they suffered."

Pay dispute

Northern Ireland GPs are denied DDRB uplift

Doctors in Northern Ireland have been told that they will not receive the 6% pay rise for 2024-25 recommended by the Doctors' and Dentists' Pay Review Body, which has already been applied in the rest of the UK. Alan Stout (right), the BMA's Northern Ireland council chair, said, "The scale of anger and outrage I have been hearing over the course of the last week is unprecedented. Doctors here are totally disillusioned with the Department of Health and its attitude towards doctors' pay. [It seems] to believe that by paying us less than counterparts in the rest of the UK, it will somehow motivate us to work harder to address the chaos our health system is in."

NHS performance

Waiting list falls but A&Es feel pressure

The overall waiting list in England fell for the first time since February, from 7.64 million in September to 7.57 million in October, showed figures from NHS England. The number of people waiting more than a year for elective treatment fell by 33 321 to 249 343, but the target to eliminate waits of 65 weeks by September was missed, with 22 903 patients still waiting that long. Staff in A&E experienced more pressure than any October on record, with 2.36 million A&E attendances and 567 446 emergency admissions.

Calls for roadmap on 18 week target

The Royal College of Surgeons of England has called on the government to publish a detailed year-by-year plan for how the NHS will meet the 18 week waiting time target after a failure to eliminate very long waiting times of 65 weeks or more. Surgeons have warned that winter pressures could derail efforts to eliminate very long waits for the foreseeable future and could set back the government's plan to clear 18 week waits within five years.

Trusts fear winter targets will be missed

The NHS may miss key performance targets this winter, NHS Providers has said. Its survey of 171 leaders from 118 trusts found that 96% were extremely or moderately concerned about the effect of winter pressures on their trust and local area. The most common concerns were financial constraints and staffing provision. The top three risks to high quality patient care over winter were delayed discharge (57%), social care capacity (49%), and acute care bed capacity (43%).

Health checks

CVD checks are not working, says watchdog

Only one in 12 eligible people (8.8%) attended a cardiovascular disease health check in 2023-24, the National Audit Office found. These health checks were introduced in 2009, but responsibility for commissioning them was transferred to local authorities in 2013. Gareth Davies, head of the NAO, said, "The system isn't working effectively, resulting in not enough people having checks. This is an unsatisfactory basis for delivering an important public health intervention."

Pharmacies

Collective action is planned over funding

Pharmacies in England, Wales, and Northern Ireland are set to join GPs in taking collective action over funding, amid warnings that hundreds more businesses will be forced to close because of the financial effects of the government's recent budget. The action by pharmacies, which could begin in January, may include limiting opening hours to the minimum required by their contract, stopping free home deliveries of unfunded medicines, and opting out of locally commissioned services such as some local addiction support services, emergency contraception, and support to stop smoking.

MEDICINE

Social care

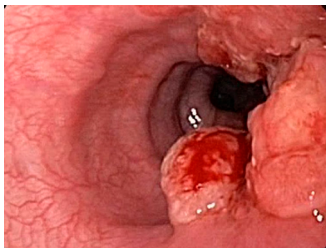
Opposition puts Scottish reform plans in jeopardy

The Scottish government has been forced to abandon plans to create a national social care service in Scotland, because of widespread opposition. Ministers said they remained committed to the idea of a national care service and were taking time to ensure that they got the proposals right. The SNP led Scottish government announced its intention to reform social care in 2021. The aim was to streamline, standardise, and improve care services by transferring responsibility for service delivery from local councils to a national service run by care boards. But the estimated costs have risen, and critics say that expensive structural reform is not the answer.

The plan to create a national care service for Scotland has been abandoned

Cancer

Call for 150000 volunteers for three research projects



Three cancer projects have been selected as part of the NHS DigiTrials initiative, which aims to sign up volunteers to help improve cancer diagnosis and treatment. BEST4 Heartburn Health is looking for 120 000 volunteers to help test a new screening technique for oesophageal cancer, which involves swallowing a sponge on a string to extract cells from the oesophagus. A further 20 000 volunteers are needed for MyMelanoma to help improve understanding of melanoma skin cancer. And the Protect-C trial will recruit 5000 women for saliva based tests to check their genetic risk of developing ovarian, breast, endometrial, or colorectal cancer.

Wellbeing

Feelings of low satisfaction and anxiety increase

One in 20 UK adults (5.4%) reported low satisfaction with their life in April to June 2024, an increase from 4.5% in April to June 2019, showed figures from the Office for National Statistics. Feeling high anxiety also increased across the population, as 23.4% of adults reported having felt this way the previous day when asked in April to June 2024, up from 21.2% in April to June 2019. More women continued to report high anxiety (26.8%) than men (19.0%).

Smoking

New treatment option is proposed by NICE

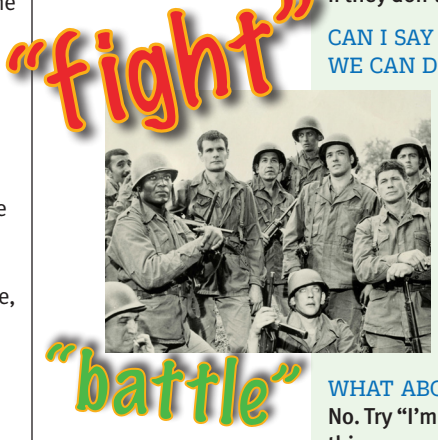
Cytisine, a pill that reduces nicotine craving, should be considered to help people stop smoking, said the National Institute for Health and Care Excellence. The updated guidance is out for consultation after new evidence showed that people who received cytisine were 30% more likely not to smoke for six months or longer than with placebo or no medication. Cytisine, also known as cytisinicline, was approved by the Medicines and Healthcare Products Regulatory Agency in 2019 but has been available in the UK only since January 2024.

Cite this as: *BMJ* 2024;387:q2559

STROKE

Last year 111137 people in England were admitted to hospital after a stroke, up **28%** from 87 069 in 2004-05. The biggest rise (55%) was in people aged 50-59

[NHS England]



SIXTY SECONDS ON . . . **WHAT NOT TO SAY**

HOW FAMILIAR ARE YOU WITH THE "DIRTY DOZEN"?

Saw it last week—classic war film with Lee Marvin, Telly Savalas, et al. Brilliant.

WHERE ARE YOU GOING WITH THIS?

Different combat zone. We're talking communication habits, possibly medicine's new battleground. Researchers have described an etymological minefield of 12 "never words or never phrases" you should avoid using with seriously ill patients. "Even a single word may frighten or disempower patients—and possibly hamper shared attempts at decision making," they say in *Mayo Clinic Proceedings*.

BUT I'M A SENSITIVE COMMUNICATOR

I don't doubt it. But how often do you use terms that might be harmful or offensive, diminish agency, shut down dialogue, or give false hope?

UM . . . PLEASE EXPLAIN MORE

Never words are "conversation stoppers." Even saying "your mother needs a transplant" can close off deliberation about a patient's priorities. Instead, asking permission to consider what is possible can redistribute the power. So say, "Her heart is getting worse. May we talk about what that means and what to do next?"

MIND YOUR LANGUAGE?

Exactly. Don't tell patients to "fight" or "battle"—they're "never words" too. Best to say "we will face this difficult disease together," to avoid implying that sheer will can overcome illness or make someone think that they're letting their family down if they don't recover.

CAN I SAY "THERE'S NOTHING ELSE WE CAN DO"?

Absolutely not. Even with no prospect for cure, it's possible to focus on treatments to improve symptoms or quality of life. And never say "we're withdrawing care," which may imply giving up. Instead "describe the advantage in refocusing the goal of care," suggest the researchers.

WHAT ABOUT "IT WILL ALL BE FINE"?

No. Try "I'm here to support you throughout this process," which is offering support that is realistic and humane.

Matthew Limb, London

Cite this as: *BMJ* 2024;387:q2537

New NHS provider league table for England will mean "no more rewards for failure"

The government is set to introduce a public league table to rank NHS providers in England and reward the top performers, including by allowing them to keep budget surpluses and choose how they reinvest that money.

The Department of Health and Social Care said NHS England will review all NHS providers to determine their league table positions and to ensure "no more rewards for failure." Poorly performing managers will be replaced, and "turnaround teams of expert leaders" will be deployed to help providers with "big deficits or poor services," it said.

Health secretary Wes Streeting said the reforms aimed to ensure "every penny of extra investment is well spent and cuts waiting times for patients." He added, "There'll be no more turning a blind eye to failure. We will drive the health service to improve, so patients get more out of it for what taxpayers put in. Our health service must attract top talent, be far more transparent to the public who pay for it, and be run as efficiently as global businesses."

A system that encourages managers to focus on delivering the best care would be good news for everyone
Louise Ansari

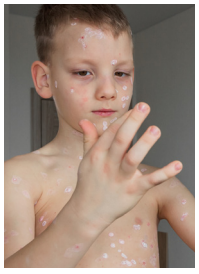
The NHS Oversight Framework will be updated by April 2025 and will set out how providers will be monitored. A new pay framework for "very senior managers," such as chief executives, will also be published before April and will mean those who fail to make progress will be ineligible for pay increases. In contrast, managers who are "successfully improving performance will be rewarded, to ensure the NHS continues to develop and attract the best talent to the top positions," the department said.

The changes came after Ara Darzi's NHS review reported that resources had risen by 20% over the past five years, while the number of patients treated had increased by only 3%. Darzi also noted that "neither the timeliness of access nor the quality of care are routinely factored" into the pay of the chief executives of NHS trusts, though organisation turnover is. He argued that this "encourages organisations to grow their revenue rather than improve operational performance."

Naming and shaming

Commenting on the announcement, Louise Ansari, chief executive of Healthwatch England, said, "The current system focuses on evaluating service performance based on the number of tasks it completes, and it does not do enough to measure patients' overall outcomes and experiences. Establishing a better system that encourages NHS managers to focus on delivering the best care as efficiently as possible, and leads to quicker changes at struggling trusts, would be good news for everyone."

Millions of children missed measles jabs last year, WHO and CDC warn



Inadequate vaccination coverage drove the number of the world's measles cases to an estimated 10.3 million in 2023, the World Health Organization and the US Centers for Disease Control and Prevention have said in a joint report.

Coverage of at least 95% of children with two doses of the vaccine is needed to prevent outbreaks. However, more than 22 million children missed the first dose of a measles containing vaccine (MCV1) last year, said the agencies.

Estimated global coverage of MCV1 reached a peak of 86% in 2019, before falling to 81% in 2021 in the pandemic. Although coverage improved to 83% in 2022, it remained unchanged in 2023. No WHO region has regained peak levels.

Because of gaps in coverage, 57 countries experienced large or disruptive outbreaks in 2023, up from 36 in 2022. Eighty two countries had achieved or maintained measles elimination by the end of 2023. WHO Americas region is free of endemic measles as of this week, after Brazil's elimination was re-verified.

An estimated 107 500 people died from measles in 2023, most of them under 5 years old. Although measles cases increased from 2022, deaths fell by 8%, because case surges were in countries with a lower risk of death.

The report emphasised that vaccine coverage was lower and measles incidence higher in low income countries and countries with fragile, conflict affected areas. Countries and global partners must make urgent and targeted efforts to tackle inequities and ensure all children are fully vaccinated, it urged.

Carla Delgado, Manchester

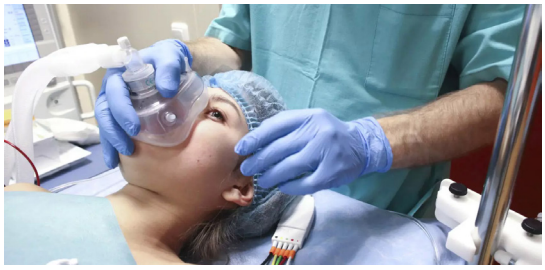
Cite this as: *BMJ* 2024;387:q2541

A million operations a year not performed due to anaesthetist shortage

The UK's "dire" shortage of anaesthetists is undermining the NHS's efforts to reduce waiting lists for treatment, and the situation could worsen without urgent investment, a report from the Royal College of Anaesthetists has warned.

It pointed out the UK lags behind many European nations in anaesthetic staffing levels, with only 14 anaesthetists per 100 000 people. This puts the UK 26th in Europe, below countries such as Germany (37 per 100 000), Italy (25), and France (17) and behind some lower income countries such as Moldova (16).

Although numbers of consultant and SAS anaesthetists in the UK rose from 10 149 in 2020



LEON NEAL/AP/ALAMY

Wes Streeting and the chancellor, Rachel Reeves, visiting St George's Hospital, in south London last month

However, Matthew Taylor, chief executive of the NHS Confederation, said NHS staff were "doing their very best for patients under very challenging circumstances, and we do not want them feeling like they are being named and shamed. There is already a great deal of performance data across the NHS. The prospect of more 'league tables' will concern health leaders, as these can strip out important underlying information."

He added, "League tables in themselves do not lead to improvement . . . trusts struggling with consistent performance issues—some of which reflect contextual issues such as underlying population health and staff shortages—need to be identified and supported in order to recover."

Elisabeth Mahase, *The BMJ*

Cite this as: *BMJ* 2024;387:q2506

to 10 628 in 2022, the report warned that demand was outstripping supply. It estimated that a current shortfall of around 1900 anaesthetists across the UK was preventing around 1.4 million operations and procedures from taking place each year. Without urgent action to invest in more anaesthetists now, this shortfall could rise to 11 000 by 2040, preventing 8.25 million operations a year, it warned.

Claire Shannon, president of the Royal College of Anaesthetists, said the government's pledge to reduce waiting lists "will only be possible if we train more anaesthetists and retain the limited numbers that we already have."

The UK has 15% fewer anaesthetists than it needs, with the shortage slightly worse in Wales (17%) than the other UK nations, said the college. In England the shortfall was most acute in the East of England and the North West (18%). The report argued that there weren't enough training places for the number of doctors who want to train, with 3520 applications for 540 available core anaesthetic training places this year.

Shannon added, "Right now, there is capacity within our training system for at least an additional 140 anaesthetic training places, so we need to see immediate action coupled with a longer term commitment to address specialty training shortages in the forthcoming revision of the NHS Long Term Workforce Plan."

Gareth Iacobucci, *The BMJ*

Cite this as: *BMJ* 2024;387:q2575

END-OF-LIFE CARE: **Hospitals miss opportunities to discuss people's wishes, report finds**

NHS hospitals are missing opportunities to record people's wishes for care at the end of life, according to the National Confidential Enquiry into Patient Outcome and Death (NCEPOD), which highlighted the importance of "normalising conversations" about death and dying. Its report found too few patients had access to early palliative care, which can improve patients' quality of life and ultimately make a "good death" more likely.

NCEPOD reviewed sample data on the quality of care provided to adults with a diagnosis of dementia, heart failure, lung cancer, or liver disease who died in hospital between 1 April 2022 and 30 September 2022 in England, Wales, and Northern Ireland. It found that 72.5% of patients did not have their preferences for care at the end of their life recorded.

Suzy Lishman (below), NCEPOD chair, said, "Almost a third of people admitted to hospital as an emergency are in their last year of life, and most have recent hospital contact offering multiple opportunities to discuss wishes, prognosis, symptom control, and end-of-life care. These were frequently missed."

WHERE DEATH was anticipated, 31.3% of patients (139 of 444) had opportunities for end-of-life care to be improved in the six months before death

The study examined hospital contacts in the six months before death, including outpatient appointments, emergency department attendances, and hospital admissions. It reported that the topic of death and dying was not discussed as often as it could have been. Where death was anticipated, 31.3% of patients (139 of 444) had opportunities for end-of-life care to be improved in the six months before death. However, clinical case note reviewers believed opportunities were missed more frequently, in 53.7% of patients (153 of 285).

The report emphasised the importance of early involvement of specialist palliative care teams. It said such services were not always available in hospitals or in the community when needed. It added that a quarter of people did not receive the end-of-life care they needed and that "round the clock" access to specialist palliative care advice, as recommended by NICE, was still not being met.

Parallel planning

All the clinicians involved in the review thought that improvements in care could be made earlier, with input of specialist palliative care key to this.

NCEPOD recommended that patients with advanced chronic disease have access to palliative care alongside disease modifying treatment (known as parallel planning), to improve symptom control and quality of life. It said palliative and end-of-life care should be a core competency for all healthcare staff.

Patients should also have a named care coordinator, an accepted standard in cancer services.

Lishman said healthcare professionals and families often avoided discussing death with people who were seriously unwell but said it could make a difference to the care delivered in the final months of life.

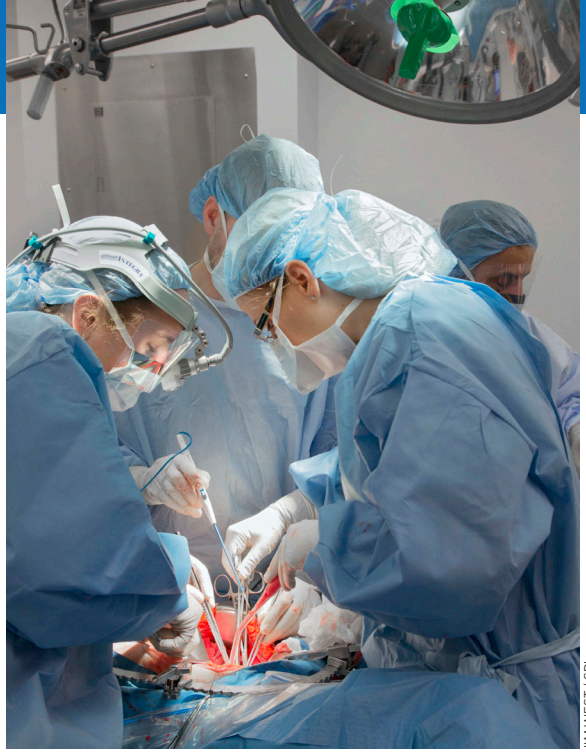
Matthew Limb, London

Cite this as: *BMJ* 2024;387:q2544

NEWS ANALYSIS

GYNAECOLOGY: **Clinicians demand urgent support to tackle waiting lists**

A failure to prioritise services has left many women with deteriorating health and waiting too long for treatment, **Emma Wilkinson** reports



JIM WEST / SPL

Women with serious gynaecological conditions are being forced to wait months or years for specialist care because of lack of capacity in the system, clinicians have warned.

An "urgent" package of care or support is now needed, with a commitment to long term, sustained funding, the Royal College of Obstetricians and Gynaecologists (RCOG) said. Since 2022 an already expanding waiting list has grown by a third. Waiting lists across the UK now number almost 764 000 women—enough to fill Wembley stadium more than eight times over, a detailed RCOG report said.

In England, almost half of the 593 000 women referred for treatment have now been waiting more than 18 weeks for care, a 482% increase since before the pandemic, the report noted. More than 27 000 women in England have been waiting for more than a year. The other UK nations have reported similar trends, with patients in deprived areas faring especially badly.

"Heart wrenching testimonials" collected by the RCOG show that every aspect of women's lives can be affected, with some patients reporting being housebound with debilitating symptoms. The impact on society and the economy in general should also not be underestimated, the report warned. It cited research by the NHS Confederation that for every additional £1 of public investment in obstetrics and gynaecology services per woman in England there was an estimated return of £11.

GPs and emergency care doctors who were questioned for the report warned that the lengthy waiting lists were putting "severe pressure" on other parts of the NHS.

Stephanie deGiorgio, a GP who works in an urgent treatment centre in Kent, said the centre sees the same women time and time again in very severe pain or having to be admitted for anaemia. "We can try to manage it, but really they need surgery," she said. "By the time women see their GP, their symptoms are often very bad, and then they are put on a long waiting list. They are already at a disadvantage for being stoical."

Barriers to care

As well as a need to increase overall levels of funding, the report identified problems to do with disincentives in commissioning for primary and secondary care to work together. Gynaecology has suffered from a lack of prioritisation, with professionals facing the extra burden of producing business cases that can then be rejected as other types of care take precedence, the RCOG said.

Workforce shortages have been well documented, but access to timely scans, the complexity of surgery, pressures in theatre, and poor communication between different parts of the NHS are all adding to the problems, it concluded.

While women are on the waiting list their condition gets more complex, and we as surgeons end up spending more time operating on them Ranee Thakar

Part of the urgent support needed was in enabling the NHS to provide clearer communication with patients about waiting times and also advice and resources on managing their condition.

Community services, such as women's health hubs, are needed, but this will take time, capacity, and funding to enable multiprofessional working, the report said. Priority should also be given to theatre space for gynaecology across the NHS as part of elective recovery plans.

Speaking to *The BMJ*, RCOG president Ranee Thakar said she saw the effects daily. "Staff are under pressure, but it is also about clinic space, theatre capacity, and equipment.

"While women are on the waiting list their condition gets more complex, and we as surgeons end up spending more time operating on them or treating them."

Instead of a waiting list that is based on clinical need—where gynaecological conditions are often not seen as urgent—the impact on women's lives should be taken into account, Thakar said. "We need to ask how we, at system level, in our hospitals, actually ensure that women's health is prioritised."

Kamila Hawthorne, chair of the Royal College of General Practitioners, said it was "deeply worrying" to see patients' health and quality of life deteriorating. "Cutting waiting lists

By the time women see their GP, their symptoms are often bad, then they're put on a long waiting list Stephanie deGiorgio

will benefit everyone across the NHS, particularly outpatients, and we need to see everything being done to make this possible," she said.

Women's health hubs

Where local initiatives to tackle waiting lists have been piloted, capacity, payment issues, burnout, and lack of resources to scale up projects were hampering service improvement, the report found.

One solution is women's health hubs. England's 42 integrated care boards have been tasked with setting these up by the end of this year, but current coverage is patchy, and "sporadic implementation" will perpetuate health inequalities, the RCOG warned. Lessons need to be learnt from the successful ones.

Aamena Salar, a Birmingham GP with a special interest in women's health, has spent a decade setting up community gynaecology services where women can see GPs, specialist nurses, and consultants and access diagnostic tests. Other than cancer and fertility, her hub sees all patients and has a waiting list of six to eight weeks.

Over time, more consultants have come on board at the service, which now has contracts with several hospitals in the region and sees 13 000 women a year. Primary care absolutely had a role in delivering services, Salar said, but national guidance was needed on how this could be done well.

Salar and colleagues are keen to share their experience to help other hubs get off the ground. "There are key elements around training, who is going to be delivering services, the competencies you need, and what support you need, and that could be standardised across the UK.

"These are all common conditions. For example, we have designed an endometriosis pathway to set out the accountability and responsibilities of primary care, what you need from a hub, and when a patient needs to be referred to secondary or tertiary care. We need to understand what this intermediate level looks like."

But Salar said women's health hubs were not the sole answer. "Services are fragmented, there's not enough of us, there's not enough funding, and it's taken years to get to the stage that we're at. I think we need to look a lot more holistically about how we support women with education and self care."

Emma Wilkinson, Sheffield

Cite this as: *BMJ* 2024;387:q2552

Services are fragmented, there's not enough of us, there's not enough funding Aamena Salar

WAITING LISTS across the UK now number almost 764 000 women—enough to fill Wembley stadium more than eight times over

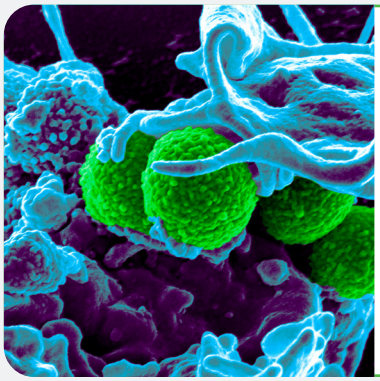
Antibiotic resistant infections surpass pre-covid levels

The number of serious antibiotic resistant infections in England rose to an estimated 66 730 in 2023, up 7% from 62 314 in 2019 and an increase of 14.6% from the 58 224 identified in 2022, show figures from the UK Health Security Agency (UKHSA).

The figures signal a return to levels of activity in antibiotic resistant bacterial infections seen before the covid pandemic, after a dip to 55 792 in 2021.

Antibiotic use also rose in 2023 to 17.6 daily defined doses per 1000 inhabitants each day, a 2.4% rise on the 2022 figure. The rise was seen in all primary and secondary care settings except dental practices, and prescribing levels are now in line with those seen in 2019. The increases were across the majority of antibiotic groups, with penicillins accounting for the most frequently prescribed antibiotic group in primary and secondary care. In 2023 antibiotic consumption continued to be highest in general practice (71.7% of overall consumption).

This report lays bare the devastating impact of antimicrobial resistance in the UK and around the world Andrew Gwynne



UKHSA found the number of bacteraemia episodes caused by bacteria that were resistant to one or more defined antibiotics increased by 3.5% between 2019 and 2023 (from 18 082 to 18 723). Most of these (65%) were caused by *E coli*

Jenny Harries, chief executive of UKHSA, said, "Increasingly the first antibiotics that patients receive aren't effective at tackling their infections. That's not just an inconvenience—it means they are at greater risk of developing a severe infection and sepsis. Our declining ability to treat and prevent infections is having an increasing impact, particularly on our poorest communities."

Inequalities in risk

Data for 2023 showed the widening gap between people living in the most and least deprived areas of the UK when it came to likelihood of acquiring an antibiotic resistant infection.

People in the most deprived communities in England were 43% more likely to have an antibiotic resistant infection than those in wealthy areas (38.1 per 100 000 versus 26.7 per 100 000). This gap has widened since the 29.4% reported for 2019. London has the highest antimicrobial resistance burden rate (41.5 per 100 000 population), followed by the North West (35.8 per 100 000).

Most patients who were identified with antibiotic resistant infections in 2023 were white (89.8%, 71 457). Among ethnic groups, Asian or Asian British people had the highest proportion of infections that were antibiotic resistant (at 39.4%, double the 20.1% in white ethnic groups). UKHSA said it was working with partners to understand the reasons for these differences and design interventions to tackle them.

The minister for public health and prevention, Andrew Gwynne, said, "This report lays bare the devastating impact of antimicrobial resistance in the UK and around the world. It is clear this emergency cannot be tackled by one nation alone; that is why we are working tirelessly with partners to implement the commitments made by global leaders on AMR at this year's UN general assembly."

Brian Kennedy, London

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THE BIG PICTURE

Fire kills newborns in Indian hospital

Ten newborn babies were killed in a blaze in a neonatal unit of a hospital in northern India.

The fire broke out late last Friday night at the Maharani Laxmi Bai Medical College in Jhansi, in the state of Uttar Pradesh, 450 km south of Delhi. Parents of the 55 babies being treated in the unit had to wait for authorities to carry out DNA testing before discovering whether their children were among the fatalities.

Officials told local media that the blaze—believed to have started in a piece of machinery used to enrich the level of oxygen in the atmosphere—spread quickly and suddenly through the ward. An initial inquiry also pointed to lapses in safety protocols, including expired fire extinguishers and non-functioning fire alarms.

Alison Shepherd, *The BMJ* Cite this as: *BMJ* 2024;387:q2565

1

1 **Mourners stage a protest outside the hospital as they wait for updates**

2 **Rescued newborns are cared for in another area of the hosptial after the fire**

3 **Police officers examine the damaged neonatal intensive care unit**

2

3

AFP/GETTY/AP

EDITORIAL

Unlocking NHS data requires public trust

Citizens want assurance on accountability and control

If the NHS is broken, as the UK health secretary, Wes Streeting, says,[1] better use of data should be part of the remedy. Ara Darzi's report on the state of the NHS rightly notes that health data offer untapped opportunities to enhance care and shift services towards the community.[2] Yet history shows this principle is easier stated than achieved.

There is broad agreement that the NHS should use health data more effectively—to treat patients, ease clinicians' workloads, and find innovative treatments—but progress has been elusive. The NHS remains, as Darzi says, in the "in the foothills of digital transformation,"[2] partly owing to a lack of public confidence in the NHS's ability to use data for secondary purposes that align with public values.[3 4]

Successive high profile failures, including care.data and General Practice Data for Planning and Research (GPDPR),[5 6] have damaged the public's faith that the NHS can or will protect privacy, or that it will ensure data are used for purposes that fall within the social licence rather than commercial gain. Some 3.46 million people—one in 20 in England—have opted out of data sharing for purposes beyond their care, including for research. Opt-outs reduce the sample size for research and service planning projects, and hamper their quality and accuracy, especially as some subgroups of the population are more likely to opt out than others: women are consistently more likely to opt out, as are people aged 40-49.

Government initiatives have attempted to restore trust. These include creation of a national data guardian and the 2022 Data Saves Lives strategy,[7 8] which included an ambition to improve trust by making data more secure and engaging more extensively with patients and the public. But we still lack consensus on how to reform the NHS's technical and regulatory infrastructure to give the public more confidence to opt in and stay opted in. Breaking the deadlock requires a new, more inclusive agreement on the correct mechanisms for overcoming distrust,[9] including new processes for data reform, clearer lines of power and accountability for data handling, and a better balance with patient control. To reach a more durable agreement, new national conversations on the future of the NHS should cover three critical issues: control, accountability, and public benefit.

MARK THOMAS

Any effort to dilute choice is likely to fail

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Repairing trust

The public has strong views about guardrails on access to patient data. Many expect to be able to opt out of uses beyond their care; some wish to differentiate between types of use or user.[10] The most realistic solution may be to reform patient choice, offering clearer options about how people's data are used and by whom.[11] Any effort to dilute choice is likely to fail.

The NHS's data sharing practices can be disorderly, with inconsistent compliance with data protection regulations.[11] Repairing trust requires transparency and an extensive clean-up of data sharing practices to improve patient safety.[12]

The risks of individual liability arising from general practice's role as data controllers can also hamper general practice data sharing. Meanwhile, extensive sharing occurs elsewhere[11] with few practical consequences if data are recklessly misused.[13] Balancing protections for doctors and accountability for patients is essential.

Findings show that patients' instinctive mistrust of private companies can be overcome for projects that provide patient choice and a clear benefit to the NHS. However, this work needs expanding and operationalising to create a public mandate for mass NHS data science.

Maximising the benefits

Some recent proposals underline a strict "profit principle," prioritising economic growth and monetary returns, as the core value motivating new data plans.[15] Centring profit is unlikely to win broad assent and should be considered against other models. Patients want to see treatments developed, including from NHS data,[16] and so the public should be consulted about fair economic value for the NHS, such as reduced-price access to any drugs or pathways developed with NHS data.

New investments should prioritise the basics that doctors and hospitals need, such as electronic prescribing across trusts, over dashboards.[17] The NHS should recruit and train data staff instead of relying heavily on consultancies.[18] It should also encourage innovation by letting the best local systems experiment and share progress, rather than imposing solutions nationally.

The long cycle of failure can be broken if the government has the will to ask the difficult questions and to listen to the answers. By involving the public in this more meaningful way and ensuring more accountability, greater choice, and clearer benefits, the NHS can evolve from the foothills to a future where data transforms patient care.

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EDITORIAL

Restructuring endometriosis care

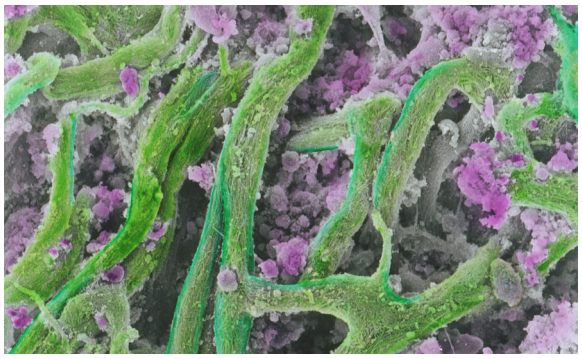
Women need better coordination between primary and secondary care

Endometriosis affects as many as 10% of women of reproductive age, or 190 million women globally.[1] It can cause debilitating chronic pelvic pain and infertility, with treatment, work loss, and healthcare estimated to cost £12.5bn annually in the UK alone.[2]

The 2024 National Confidential Enquiry into Patient Outcome and Death (NCEPOD) report audited the care provided to 941 patients with surgically confirmed endometriosis.[3] The report highlights examples of effective, timely, holistic, and patient centred care across all settings but also reminds us that we could and should do better for many women with endometriosis, throughout their care journey. Specific challenges discussed include the long timeframe to and difficulties in diagnosing and treating endometriosis, the lack of coordination between primary and secondary care, and the difficulty in accessing supportive services.

No clinical findings specifically correlate with a diagnosis of endometriosis, so GPs must often consider other conditions that have similar presenting symptoms. This may have contributed to the NCEPOD finding that 58% of women had multiple GP visits before investigations were undertaken or treatment was initiated.[4] Awareness training and education on diagnosing suspected endometriosis and managing it in the community are paramount but require collaborative support and advice from secondary care specialists.

Only 22 of 46 eligible patients were correctly referred to one of 63 British Society for Gynaecological Endometriosis (BSGE)[5] accredited specialist secondary care centres for women with severe endometriosis (defined as deep disease involving local organs or disease outside the pelvis). These centres have specialists in complex pain, urology, colorectal surgery, and fertility, but access is driven by the severity of endometriosis rather than the severity of symptoms, which do not always correlate.



P. MOTTA & G. FAMILIARI/SPL

It must be reframed as a chronic condition in which many women will have symptoms that persist or recur

Superficial endometriosis can also present with significant symptoms and comorbidities and is generally managed by gynaecologists outside specialist centres. We must therefore consider moving towards a model of care that allows these patients to access the holistic services that the specialist centres currently offer.

NCEPOD also identified fragmented episodes of care, where rapid and repeated discharge from secondary care necessitated repeated re-referrals and created gaps in ongoing support.

The number of women with endometriosis successfully treated without surgery is unknown and not captured by the NCEPOD report. With more than half of patients who have had surgery reporting persistent or recurrent pain, gynaecologists must question whether surgery is always the most appropriate management. Well organised, multicentre, large scale, collaborative trials investigating the role of surgery are currently under way.[6 7]

Randomised surgical trials are, however, notoriously difficult to perform because of their methodological and logistical limitations.[8] Oral gonadotrophin releasing hormone antagonists such as relugolix[9] seem to be effective for endometriosis but require further evaluation before being incorporated into guidance.[10]

Multidisciplinary model of care

Much can be learnt from our European counterparts, specifically Germany and the Netherlands,[11] where surgical care is provided within a regional collaborative network with access to pain management, fertility, psychological support, research, and education.

Translating this model into the NHS would involve the creation of endometriosis units within secondary care to triage GP referrals, diagnose endometriosis, and manage care for women with superficial disease. Women with suspected or confirmed severe disease could then be referred from these units to existing BSGE specialist centres, similar to the pathway for gynaecological cancers.

Restructuring services in this manner would allow for early multidisciplinary team input from complex pain, psychological, and fertility services at both unit and centre level, ensuring access to holistic individualised care for all women living with endometriosis.

Updated guidance from NICE this month reflects these needs and aspirations.[12] This includes calling for coordinated care across clinical networks through community and specialist settings for all people with known or suspected endometriosis and access to specialist pain multidisciplinary teams.

Endometriosis must be reframed as a chronic condition in which many women will have symptoms that persist or recur across their lifespan, even if they have had surgical treatment. Primary and secondary care must collaborate to design and deliver the clear, cohesive, coordinated, and longitudinal care pathway that women with endometriosis desperately need and deserve.

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Are covid-19 tests still working?

Nearly five years after the pandemic started, **Marianne Guenot** investigates whether current antigenic tests still work against the mutated virus

The summer of 2024 saw a wave of covid-19 infections spreading across the globe, causing a noticeable increase in reported cases and, in some places, hospital admissions. Wastewater surveillance indicates that the true level of exposure is much higher.

But social media sites are full of people describing covid-19-like symptoms but getting negative results on their rapid at-home tests. This has prompted many to ask if the tests we have are still fit for purpose.

CLARE JACKSON/ALAMY

Why covid tests still work against new variants

"Most existing tests used to detect covid-19 appear to be effective with currently circulating variants," the US Food and Drug Administration (FDA) told *The BMJ* in a statement.

Maria Sundaram, an associate research scientist at the Marshfield Clinic Research Institute and editor of the Infectious Disease Society of America's Real Time Covid-19 Learning Network website, says there are currently very few available data that prove that antigenic tests, also known as rapid diagnostic or laminar flow tests, detect currently circulating variants of SARS-CoV-2, the virus behind covid-19.

But that might be moot. "The vast majority of currently circulating variants (including the so called FLiRT variants fuelling the current wave) are descendants of the omicron variant—and existing evidence suggests that rapid antigen tests still perform well at identifying omicron (versus non-omicron) variants," Sundaram says, citing work done by the FDA on omicron variants as late as 2022.

Sundaram and others tell *The BMJ* that many of the mutations that define variants aren't expected to change the sensitivity of the tests. That's partly because these mutations often affect the spike protein of the virus, whereas the tests, for the most part, target proteins that are much more stable over time.

Existing evidence suggests that rapid antigen tests still perform well
Maria Sundaram

"Popular at-home antigenic tests, including BinaxNow, Flowflex, Clinitest, are based on antibodies that target the nucleocapsid of the virus, rather than the changeable spike protein," Sundaram says. "The fact that we are able to detect this 'summer wave' using our existing test capacity is, I hope, a good endorsement for the general test performance for these emerging variants."

Guarding against complacency

Still, scientists are aware of complacency. "Nothing is perfect, and nature always surprises us," says Wilbur Lam, a professor of biomedical engineering at Emory and the Georgia Institute of Technology. A mutation could unexpectedly shake up the complex 3D structure of the protein these at-home tests rely on for detection, for example.

Lam is a principal investigator for the Atlanta Center for Microsystems Engineered Point of Care Technologies (www.acmepoct.org), which acts as the national test verification centre for the US Rapid Acceleration of Diagnostics programme for covid-19. They work with the US National Institutes of Health and the FDA to evaluate whether variations of covid-19 could influence the sensitivity of antigenic tests.

When a variant of concern emerges, "we get samples of those variants from around the world," says Lam. These are grown in their category 3 laboratory and tested on the kits. The scientists can also generate mutated proteins in the laboratory and test the antibodies used in the tests in a high

throughput, cell based assay. "We've been doing this work repeatedly, every time there's a variant of concern," he adds.

Andrew Pekosz, a professor of microbiology and immunology and virologist at the Johns Hopkins Bloomberg School of Public Health, says companies that produce antigenic tests can usually tell from virus sequences alone whether they will affect test performance. But they can also challenge their tests with variants collected from recent infections in the laboratory—although these can take a few months to isolate and propagate in vitro. "You can couple that with viral sequencing, so you know exactly what the virus is in those samples," he told *The BMJ*.

Lam said that, since his team started evaluating these tests (which was before the products were even rolled out to the market), no variant has substantially affected the detection of the rapid at-home kits. Early unpublished data from their research indicate that, if anything, manufacturers have improved the sensitivity of the antibodies in their newer generation of tests. This includes the over-the-counter multiplex assays that screen for covid-19 and flu simultaneously.

I have symptoms. Why am I testing negative for covid?

There are several reasons why a test might come back negative for someone with covid-19 symptoms. Sundaram notes that a few studies indicate that the performance of the test depends on the viral load in the upper respiratory tract, which varies throughout the infection. A large systematic review of 155 studies led by the Cochrane Library in 2022 found that tests are most sensitive for samples taken in the first week after developing symptoms.

"Particularly for individuals who are asymptomatic and testing negative (but have a known or suspected exposure), a negative test result could be a result of testing 'too early' or 'too late' during the infection," she says.

These tests are so important for public health
Wilbur Lam

By coupling variant testing with virus sequencing you know exactly what the virus is in those samples
Andrew Pekosz

These tests are also known to have a fairly high rate of false negatives—a trade-off for their rapidity and ease of use. The same 2022 Cochrane review found that tests accurately detected an average 73% of cases in people with symptoms and only 55% of cases before symptoms developed.

Lam recommends always doing a second test, at least 24 hours after a negative test, before ruling out an infection completely, adding that by doing that, the level of sensitivity of these at-home tests is comparable to that of a laboratory run PCR test.

Another reason a test might not work is that it was poorly stored, is out of date, or that the person using it isn't following the instructions, which can vary between manufacturers. "Read the instructions because if you don't do it right, that makes the test less effective and decreases the sensitivity," says Lam.

The FDA also notes that there were "significant issues with counterfeit covid-19 tests during the pandemic" in the US, although it is not clear if this is still happening. The agency has a landing page containing information on how to spot counterfeit tests that encourages people experiencing issues with covid-19 testing to report them through the MedWatch voluntary reporting form.

Lastly, experts say there's a good chance that a completely different disease is causing the covid-19-like symptoms that prompted the testing in the first place. "[Covid-19] has really become a much less dangerous disease," said Lam, "not only because a good proportion of the world's population now has been vaccinated or has had the disease—so there's herd immunity now—but because the disease is attenuated in terms of severity.

"It's become very flu-like, so the likelihood that the two can get confused is pretty high," he says. That's why multiplex assays are so important, he adds. Flu and covid-19 require very different medical interventions. "That's important, especially for people who are immune compromised or elderly."

Lam and others emphasise the importance of continuing to test, even though the tests might seem like they're not working or people might not want to know (and thus have to isolate and change their plans). It might seem like the current circulating strains are no worse than a bad case of flu, but infection still carries a risk of developing long covid, which is lowered but not eradicated by vaccination.

Moreover, without the baseline data to know how much of the population is carrying SARS-CoV-2, it is very difficult to assess whether a strain is getting more dangerous. "These tests are so important for public health," says Lam, "If enough people use them, we can get a really nice sense of viral dynamics and how these viruses are spreading throughout the community."

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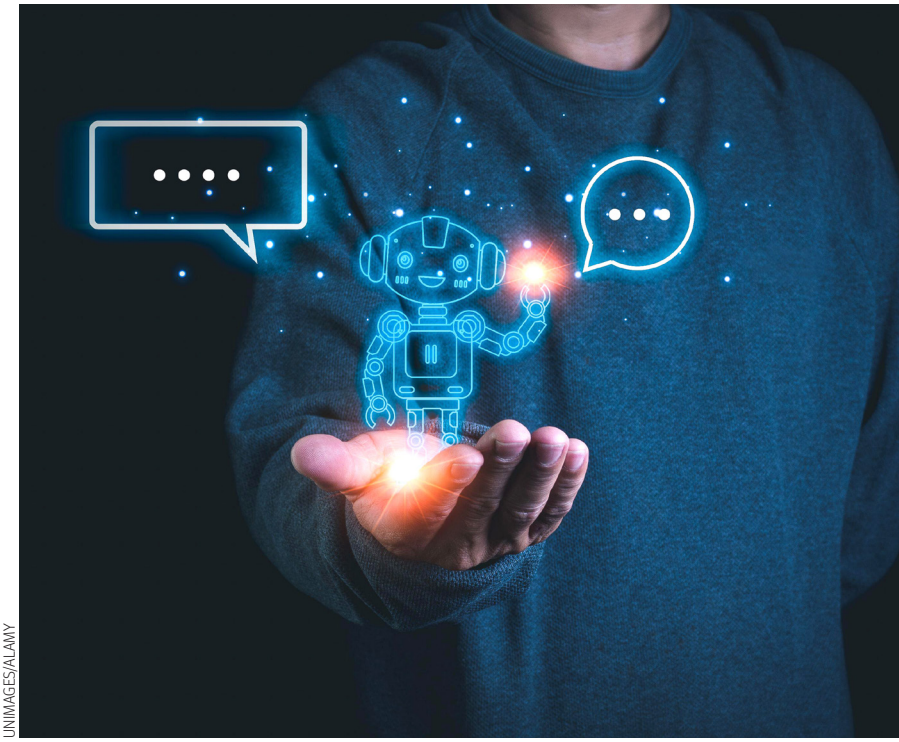
How patients are using AI

Artificial intelligence tools such as ChatGPT have hundreds of millions of users—but are they medically safe and reliable? **Chris Stokel-Walker** asks patients and physicians about the benefits and risks



UNIMAGES/ALAMY

This August, Hayley Brackley lost a large part of her vision, completely out of the blue. She'd gone to her local chemist with eye pain, and a prescribing pharmacist diagnosed sinusitis. She took the recommended medicine to try to resolve the pain, but it began affecting her ability to see.

Her first thought was to turn to ChatGPT for advice on what to do next. The chatbot advised her to go back and get the problem checked out more, which she did. Further examination by an optician found that she had significant inflammation and a haemorrhage in her optic nerve, which is currently being treated.

It's not surprising that Brackley's first port of call was ChatGPT. She prefers ChatGPT to a search engine such as Google because it can hold a conversation and more quickly find the information she wants. She's not alone: 200 million of us use the world's most popular generative AI chatbot every day. Neither is it surprising that, before her meeting with the eye consultant in which her condition was diagnosed, she sought to use ChatGPT to see what sorts of questions might be asked. Brackley has attention deficit/hyperactivity disorder (ADHD) and autism, and she thought that being forewarned about what she might be asked could help her in the interaction.

But this raises several questions. Should patients be using AI tools? How should the healthcare system react to patients using a new, often untested, tool in addition to human diagnoses? And what does patients' use of AI tell us about the gaps in the health service and how to fix them?

What does patients' use of AI tell us about the gaps in the health service?

"Dr Google" for a new age?

For decades now, patients have used technology as a first line of information when trying to understand what ails them. The risks of a patient spending time in the digital consultation room with "Dr Google" are well known. The Royal College of General Practitioners has previously told *The BMJ* that it advises patients to exercise caution when using the search engine to diagnose symptoms.

AI chatbots are a more interactive, potentially more persuasive way of finding information. But are they more dangerous?

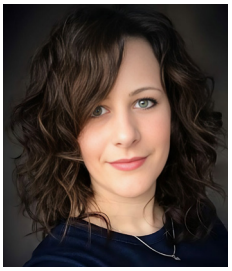
"Patients using a large language model right now to self-triage would be very risky," says Keith Grimes, a GP and digital health consultant through his company, Curistica. Grimes is far from a stick in the mud about new technology—he calls himself a "technology positive clinician"—but he worries about potential downsides of ChatGPT that need to be managed.

Many risks are involved when patients use AI to self-diagnose a condition. For example, a patient may come to a consultation armed with a diagnosis from ChatGPT that a GP then has to dissuade them from, using clinical experience. AI models such as ChatGPT are trained on a vast volume of data and then infer patterns in language to allow them to answer questions. But they don't inherently "know" anything: they are pattern matching machines trying to replicate their training data. This means that their results include the same issues that have long plagued search engines.

They're also unable to consider a patient's history. "Humans want human judgments," says Helen Salisbury, a GP based in Oxford. "They don't necessarily just want statistical results." However, in many ways AI chatbots

Using a LLM right now to self-triage would be very risky
Keith Grimes

Diagnosis or rationing decisions should not be left to AI
Helen Salisbury



Acting on a chatbot's advice led Hayley Brackley (left) to a diagnosis of an optic nerve haemorrhage

CHRISTOPHER KERN/STANFORD MEDICINE X

AI suggested a dietary change that helped resolve my father's issues
Hugo Campos

are more challenging for GPs to argue against. The way that AI chatbots are designed means that they respond in lucid, persuasive language. They've been trained to persuade.

Indeed, their persuasive power is significant: recent research suggests that they can persuade conspiracy theorists to disavow previously held views. So, their ability to persuade someone that a rash is cancerous, and that the patient is at death's door, could be strong indeed. Salisbury says, "AI can be an assistant, but diagnosis or rationing decisions should not be left solely to AI."

Truth and fiction

AI can play a role, says Grimes. He encourages doctors to embrace the shift by educating themselves about the tools their patients are using. "We shouldn't just disregard everything a patient finds by using AI," he says, as "it leads to difficult conversations." Rather than dismissing AI generated diagnoses out of hand, discussing AI chatbots can act as a conversation opener or crutch, helping doctors to navigate the strengths and limitations of AI generated advice.

But patients need to know that AI models can also "hallucinate" or make up information that they don't know. Many AI models aren't trained specifically on medical data and therefore may be prone to providing bad advice while appearing confident. Grimes warns that patients could mistakenly trust these inaccuracies, causing delays in seeking professional care or leading them to pursue an incorrect diagnosis, based on a misconception born from a large language model. "Patients may not understand the well known weaknesses of these models," he says.

Grimes points out that the companies behind the most popular AI models admit their tools shouldn't be used for medical diagnosis. Ask ChatGPT about a health issue and it advises, "I'm not a substitute for a healthcare professional." But despite that advice and plenty of other warnings, some people will still use it.

It's therefore incumbent on doctors to advise patients about the risks, some researchers argue. Some physicians are already drafting advice: Yale Medicine in the US, for example, has issued some guidance for patients on how to safely use generative AI tools such as ChatGPT for health information.

Benefits and bias

Elsewhere, some companies have developed models specialising in medicine, such as Google's Med-PaLM language model. A version of that medical model got 91.1% of the answers correct in the US Medical Licensing Exam, Google reports. However, that exam was taken under conditions unlike those a doctor encounters when a patient presents at the door.

The use of AI poses other problems beyond simply making stuff up. AI systems work by generalising across populations, with all the issues that raises. And they're trained on information that itself can be biased.

The BMA recently published a set of principles for applying AI in healthcare. Key among them: "There is a growing body of evidence that AI and data driven health technologies can lead to discrimination against underserved or marginalised groups, exacerbating existing bias and systemic health and healthcare inequalities."

Giving one such example, the BMA principles say that skin cancers and other skin lesions in patients from ethnic minorities are less well picked up by AI informed diagnostic tools, as these tools are trained

on data from white patients. The principles state, "One study from 2021 examined the representation of ethnic minorities in images of skin lesions that were used to train AI systems. Researchers found that of 2436 pictures where skin colour was stated, only 10 were of brown skin and only one was of dark brown or black skin. Among the 1585 pictures with information on ethnicity, none were from people with African, Afro-Caribbean, or South Asian backgrounds."

A recent study of 61 million patient records in England by researchers at Oxford University found one in 10 lacked any ethnicity coding whatsoever, while 12% had conflicting evidence of ethnicity in their records. Sara Khalid, one of the study authors, commented, "Because AI based healthcare technology depends on the data fed into it, a lack of representative data can lead to biased models that ultimately produce incorrect health assessments."

Filling in gaps

Whether patients use specialist trained medical models or the more popular general ones, they are adopting AI to help them navigate their care, despite fears raised by a 2022 Health Foundation survey that AI would make healthcare more impersonal. This suggests that some AI use reflects a lack of good options available to patients rather than a strong desire to use the tech.

A recent US survey by the Pew Research Center found a roughly equal split between people who believed that AI would be a game changer and those who believed that it would be harmful. In all, 38% of those surveyed thought that AI would help patient outcomes, while 33% said that it would result in worse health outcomes for patients.

Hugo Campos turned to AI chatbots to help manage his father's chronic kidney disease. "Doctors are becoming scarcer every day," says Campos, who lives in Brazil. Using AI unlocked a change in his father's illness that helped alleviate some of the worst symptoms. "AI went beyond the doctor's advice and suggested a dietary change that helped resolve the issue," says Campos. And importantly, he says, it was able to do this more quickly than he could get his father in front of a doctor.

One in five doctors are using generative AI in primary care

The adoption of AI systems poses difficult questions for healthcare professionals and the systems in which they operate. Brackley first went to the chemist who misdiagnosed her eye pain because she couldn't get quick access to a GP.

And it's here that AI could help. One in five doctors—never mind patients—are using generative AI in primary care, shows a recent survey published in *BMJ Health & Care Informatics*. Some 28% of respondents said they used the tools to offer alternative diagnoses, while a quarter used them to suggest treatment options for patients. People who are already trained in a subject can better assess answers, and pick out falsehoods or inaccuracies, than those who are not.

Future of AI

Given the use of AI by doctors and patients alike, it seems impossible to prohibit its use by either party. But laying down guidelines to ensure its sensible use seems like one way forward.

The GMC's *Good Medical Practice* 2024 guidance, which sets out professional standards for doctors, includes reference to digital tools that use AI technologies. It states that, to keep patients safe, doctors must "report adverse incidents involving medical devices (including software, diagnostic tests, and digital tools) that put the safety of a patient or another person at risk, or have the potential to do so."

In April the Medicines and Healthcare Products Regulatory Agency (MHRA), which regulates and approves new technologies and medical devices in the UK, set out its strategic approach to AI. It said it was in the process of implementing a regulatory reform programme related to AI driven medical devices to include risk proportionate regulation of AI as a medical device. This would consider the risks of these products while permitting scope for further development of transformative healthcare, said the agency.

Laura Squire, MHRA chief quality and access officer, commented, "Increasingly, we expect AI to feature in how those we regulate undertake their activities and generate evidence, and we therefore need to ensure we understand the impact of that in order to continue to regulate effectively."

The MHRA's existing "yellow card" scheme also enables anyone to report concerns to the agency about a medicine or device, including one incorporating AI.

Salisbury says that she's worried about any potential use of AI to make final diagnoses, not least because medical conditions often aren't easily placed into discrete boxes. She also worries that the potential gains in efficiency will imbalance the standard of treatment patients receive.

"My worry is that tech will nearly always be cheaper than people," she says. "There is a worry that, although people need people and will prefer to talk to people, they'll only be granted access to tech."

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