this week

JETPACK PARAMEDICS page 45 • **NHS STAFF SURVEY** page 46 • **OCKENDEN REVIEW** page 47

SHUTTERSTOCK

UK adds nine symptoms to covid list

The UK's official list of covid symptoms has been updated to include sore throat, fatigue, headache, and six others which are now commonly associated with the virus.

Shortness of breath, an aching body, a blocked or runny nose, loss of appetite, diarrhoea, and feeling sick or being sick have also been added to the list on the NHS website. "The symptoms are very similar to symptoms of other illnesses, such as colds and flu," the website says.

The official list previously had just three symptoms—fever, persistent cough, and a loss or change in taste or smell. Yet WHO, the US Centres for Disease Control and other European countries have all listed a far wider range for some time.

Tim Spector, the lead scientist of the Zoe covid symptom tracker app, who told *The BMJ* last December the UK was an international outlier in limiting its list to three symptoms, said, "Everyone at Zoe is happy to see that the NHS has finally updated the official symptom list after two years of lobbying. The addition of more symptoms is a step in the right direction and it could help reduce infections.

"However, while this is good news, I'd like to see the order of the symptoms changed, as the NHS list puts far too much emphasis on symptoms like fever and anosmia, which we know are much less common since the omicron variant emerged. According to the Zoe covid study, the top five symptoms being reported by contributors with a positive covid test are runny nose (83%), fatigue (71%), sore throat (69%), headache (69%), and sneezing (68%)."

Spector added, "We were told more symptoms could overwhelm testing capacity, so it makes sense that since free testing has now stopped, the list has been updated."

GPs have been calling since last June for the symptoms to be amended, concerned that patients were confused. But as free universal testing was withdrawn on 1 April, some experts have argued the changes have come too late. Kit Yates, senior lecturer in the Department for Mathematical Sciences at Bath University, said on Twitter, "We've been asking for this for over a year and now it's come too late to be really helpful."

A spokesperson for the UK Health Security Agency said, "The main symptoms remain a fever, a new or continuous cough and/or a loss of taste and smell." They said a longer list had been included in guidance since 2020.

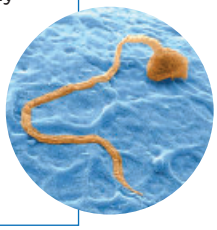
Gareth Iacobucci, *The BMJ*

Cite this as: *BMJ* 2022;377:o892

Tim Spector, lead scientist of the Zoe app, said, "The addition of more symptoms is a step in the right direction"

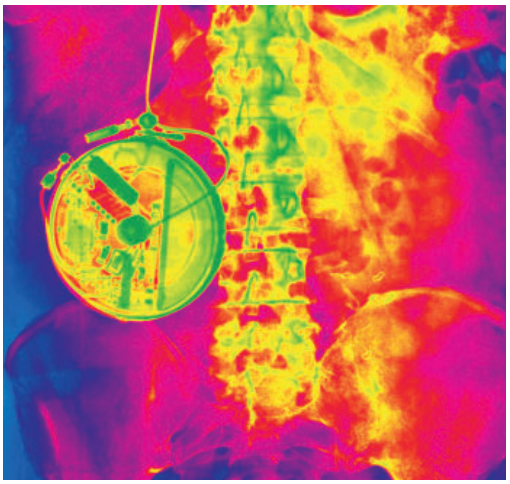
LATEST ONLINE

- Gains in cancer survival rates are set to reverse owing to staff shortages, MPs warn
- Global health boards remain dominated by men from high income countries, study finds
- IVF doctor must pay $5.25m damages for using his own sperm



SEVEN DAYS IN

Artificial pancreas is piloted in nearly 1000 people with type 1 diabetes in England



CHU MONTPELLIER / PHANIE / SPL

Almost 1000 adults and children with type 1 diabetes in England are piloting new technology that continually monitors their blood glucose levels and automatically adjusts the amount of insulin they are given through a pump to see if it helps to better control their condition than regular finger prick tests and injections.

The hybrid closed loop (HCL) system, which is also known as an artificial pancreas, is delivered through 35 diabetes centres and has been used by 875 people for a year so far.

Data on blood glucose levels from the study will feed into the NHS's National Diabetes Audit and build evidence on the system that will be assessed by NICE.

Signals from a sensor under the skin are sent to the insulin pump, which calculates how much insulin to release into the bloodstream. Users also need to update the pump after they eat with the amount of carbohydrates they have consumed.

It is estimated only a third of children with type 1 diabetes are able to achieve good blood glucose levels. It has been calculated that a five year old will avoid 23 000 insulin injections and 52 000 finger prick tests by the time they are 18 if they use the HCL system.

Chris Askew, chief executive of Diabetes UK, said, "This technology has the potential to transform the lives of people with type 1 diabetes."

Zosia Kmietowicz, *The BMJ* **Cite this as: BMJ 2022;377:o874**

Covid-19

NHS staff will still be able to access free tests

Free symptomatic testing for SARS-CoV-2 will be provided for people living or working in some high risk settings, including staff in the NHS, in care homes and hospices, and in prisons and places of detention, said England's health secretary, Sajid Javid. People being discharged from hospital into care homes, hospices, homelessness settings, or domestic abuse refuges will also be tested, as will patients in hospital. Patients with a higher risk of serious illness from covid will be sent lateral flow tests for use if they have symptoms.

Vaccines are offered to children over 5

Vaccination appointments were made available for children aged 5 to 11 in England from 2 April, as guidance from the Joint Committee on Vaccination and Immunisation recommended in February that all children would benefit from a non-urgent offer of the vaccine, and almost five million are now eligible. England's health secretary, Sajid Javid, said, "Children without underlying health conditions are at low risk of serious illness from covid, and the priority remains for the NHS to offer vaccines and spring boosters to adults and vulnerable young people, as well as to catch up with other childhood immunisation programmes."

Pandemic saw rise in self-funding of surgery

Data from the Private Healthcare Information Network showed that 4732 people self-funded their hip replacements from July to September 2021, up by 164% from 1795 in the same period in 2019. The same period saw a 119% rise in people self-funding knee replacements (from 1117 to 2448) and a 64% rise in those paying for cataract operations (from 8091 to 13 231). The figures also showed that consultants were moving back to the private sector after supporting the NHS during the pandemic, but fewer consultants were actively treating private patients than before the pandemic.

Free parking ends for England's NHS staff

Healthcare unions described a decision to end free hospital car parking for NHS staff in England as "deplorable" and an "insult." Free parking was introduced in March 2020 to relieve pressure in the pandemic. The reversal will affect all NHS staff apart from those working night shifts and will cost NHS workers a total of around £90m a year. Healthcare unions called on the government to scrap the reintroduction of parking charges. The BMA's Latifa Patel called England an outlier, describing the move as a "severe blow" to doctors.

Hip dysplasia

Check suspected cases with ultrasound, say surgeons

All newborns with suspected hip abnormalities should receive ultrasound checks for developmental dysplasia of the hip (DDH) within two weeks, said the British Society for Children's Orthopaedic Surgery. If hip dysplasia is identified early, splint treatment is almost always effective, but nearly three quarters (71.1%) of UK cases are identified from age 1. A screening pathway for identifying DDH is already in place in the UK, but rates of late diagnosis have not changed since the 1970s, said the society.

Osteoporosis

First new drug approved for more than a decade

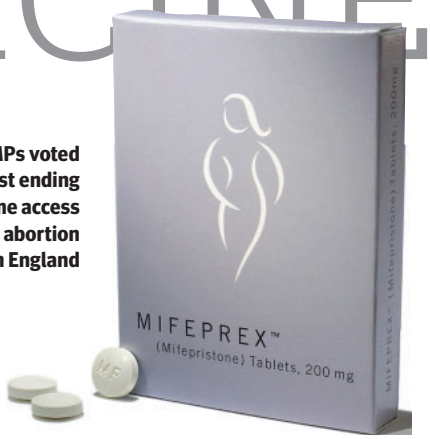
NICE recommended romosozumab for postmenopausal women with a high risk of fracture, after a clinical trial showed that taking it before alendronic acid reduced the relative risk of vertebral fractures by 50% over 24 months when compared with alendronic acid alone. The risk of non-vertebral fractures was also 19% lower in women who took romosozumab. NICE's Helen Knight said, "Romosozumab is the only drug available that can help to form bone as well as increase existing bone strength. It is the first new treatment for osteoporosis for several years."

MEDICINE

Abortion

Women in England keep right to take pills at home

Women in England will still have access to medical abortion pills to take at home, as MPs voted by 215 to 188 to retain a service introduced temporarily during the pandemic. Since the service was first offered two years ago 150 000 women have had abortions at home. Clare Murphy, chief executive of the British Pregnancy Advisory Service, said, "We are absolutely delighted that MPs followed the evidence and above all listened to women."



MPs voted against ending home access to abortion pills in England

UK medical students get variable education

Students at UK medical schools are missing out on comprehensive education on abortion care amid highly variable curriculums, research in *BMJ Sexual & Reproductive Health* found. All 18 of 33 medical schools that completed an ethico-legal survey said they provided compulsory education on ethical and legal aspects of abortion care. But only 11 of 13 schools that responded to a clinical survey said teaching on the clinical aspects of abortion was compulsory. In both surveys a period of one to two hours was the most commonly cited time spent on teaching about abortion.

Professionalism

Drop "demeaning" junior doctor title, says report

The term "junior doctor" should be retired because it is outdated, demeaning, vague, and confusing, said a report commissioned by Health Education England. Scarlett McNally, author of the report and a consultant orthopaedic surgeon, recommends four alternative terms: foundation year 1 doctor (to identify newly qualified foundation doctors); central doctor (to identify doctors generally within their first five years of qualification); registrar (for those with more experience and skills in a specialty); and consultant or associate specialist (for the most experienced).

Social care

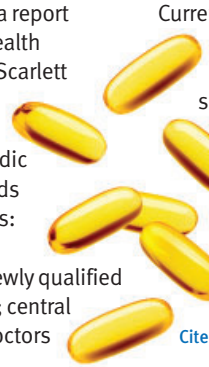
MPs vote to exclude council payments from cap

MPs voted on 30 March to reject an amendment to the Health and Care Bill, passed by the House of Lords, for means tested costs local councils pay towards a person's care to be included in the cap of £86 000, which is being introduced in October 2023. Hugh Alderwick of the Health Foundation said, "This is not levelling up: it's unfair and a backward step," he said. The bill will return to the Lords before it is passed.

Vitamin D

Evidence call for how to improve uptake

The Office for Health Improvement and Disparities called for evidence from the public, health experts, and industry bodies on how to improve uptake of vitamin D and reduce inequalities. Current advice is for all adults and children to consider taking a daily 10 microgram supplement from October to March. However, around one in six adults and almost one in five children in the UK have levels lower than recommended.

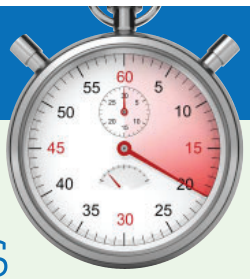


Cite this as: *BMJ* 2022;377:o886

WAITS

There are 570 000 women in the UK waiting to see a gynaecologist. In England, nearly 25 000 women have been waiting over a year for care, up from **66** before the pandemic

[Royal College of Obstetrics and Gynaecology]



SIXTY SECONDS ON . . . JET PACK PARAMEDICS

ONE GIANT LEAP FOR MANKIND?

We're talking Cumbria rather than the Moon. The Great North Air Ambulance Service (GNAAS) has teamed up with the renewable energy company Ørsted and Gravity Industries to launch the world's first trial of jet suit paramedics, to take place in the Lake District.

UP, UP, AND AWAY?

You could say that. The programme aims to train experienced air ambulance paramedics to use the jet pack suits to reach hard to access patients more swiftly before a helicopter or ground team arrives. The suits were invented by Richard Browning, a former Royal Marines reservist who has been described as "a real life Iron Man."

A MAJOR BOOST?

Sending out paramedics in the suits to provide triage and urgent casualty response has generated "enormous time savings" in trials when compared with standard access methods on foot or by helicopter, said GNAAS. Its director of operations, Andy Mawson, said, "We think the jet suit paramedic will speed up the response to some hard to access patients and allow us to reach more patients." In the latest trial Browning flew to a point on Scafell Pike in the Lake District in four minutes, while a ground team took 45 minutes to hike there.

HOW DO THEY WORK?

The 1050 horsepower suits allow the paramedics piloting them to direct themselves by moving their hands. The suits can carry about 10-15 kg of luggage, which can incorporate a defibrillator and patient monitoring equipment.

HOW MANY JET SETTERS ARE BEING TRAINED?

GNAAS plans to train three paramedics to pilot the suits. Mawson was the first of these to complete a "free" flight, meaning that he had no safety rope. He said that the most recent trials in the Lake District in early March were "a great success, and showed how far and how quickly the jet suit can reach otherwise inaccessible locations." The GNAAS believes that the suits could be used in 15-20 callouts a week, and it aims to start trials on real callouts this summer.

Gareth Iacobucci, *The BMJ*

Cite this as: *BMJ* 2022;377:o876

PETER BYRNE/PA/ALAMY

NHS staff survey underlines need for workforce strategy

MPs have rejected a "once in a decade opportunity" to tackle longstanding failures in NHS workforce planning after voting against a proposed amendment to the Health and Social Care Bill that would require the health secretary to publish an independently verified workforce assessment at least every two years.

Amendment 29, which passed in the House of Lords last month, was backed by more than 100 healthcare organisations, including the BMA, the Academy of Medical Royal Colleges, and the Royal College of Physicians.

Rejection of the proposal in the House of Commons came on 30 March, the same day as the publication of the latest NHS staff survey. The survey's findings had prompted universal calls for an NHS workforce strategy, from healthcare unions, health think tanks, and NHS organisations alike.

The 2021 survey ran last October and November and was completed by 628 475 staff, a 48% response rate. It showed that almost three quarters worked in NHS organisations with too few colleagues to allow them to do their job properly. Only 27% of staff said staffing was sufficient at their organisation, down from 38% in 2020.

But it detected significant areas of concern around the health and wellbeing of staff, as a third of doctors and dentists reported feeling burnt out from work.

Before the amendment vote many organisations had appealed to MPs for support. NHS Providers released results of a survey showing that some 89% of trust leaders did not think that the NHS had robust plans in place to tackle workforce shortages. And almost all (98%) warned that shortages would slow down progress in tackling the growing care backlog.

Trust leaders overwhelmingly (88%) supported amendment 29, said NHS Providers, and had a loud and clear message for MPs: failing to back it would only compound staff shortages and workforce burnout.

No one in leadership appears to have the bravery or will to compare the numbers we have against the number we need
Claudia Paoloni

Universal disappointment

Defeat of the amendment by 82 votes (249 *v* 167) was met with universal disappointment from unions and healthcare organisations.

The BMA said that, given the consistent pleas about the precarious state of the NHS workforce, the vote was "truly disappointing." It's deputy chair of council, David Wrigley, said, "The decision to vote this down is a huge, missed opportunity and means we still won't know how many health staff the country needs—despite being all too clear that staff and services are dangerously overstretched."

The Doctors' Association UK agreed, saying that workforce planning failures were at the very root of all problems highlighted in the latest NHS staff survey, so parliament's refusal to address this was "even more disappointing."

Its chair, Jenny Vaughan, said, "'Failing to plan, planning to fail' was never more bitterly appropriate. How can doctors even hope to cope when the government remains hopelessly oblivious

AT A GLANCE—SOME FINDINGS FROM THE NHS STAFF SURVEY

Care standards

- 59% would recommend their organisation as a place to work, down from 67% last year
- 68% would be happy with the standard of care provided by their organisation for a relative, down from 74%

Enthusiasm for work

- 67% feel enthusiastic about their job, down from 73%

Feeling valued

- 42% are satisfied with the extent to which their work is valued, down from 48%—the lowest rate in five years

Burnout

- 34% feel burnt out because of work (including 33% of doctors)

Pay

- 33% of staff are satisfied with their pay, a 4 point drop. Doctors' satisfaction fell from 60% to 50%

Neonatal ICUs roll out test for gentamicin ototoxicity

A bedside test that detects a genetic variant in babies that can leave them deaf if they are given gentamicin is being used in three Manchester neonatal intensive care units.

The swab test takes just 25 minutes to deliver results, compared with the traditional test's several days. Babies admitted to ICUs are usually given gentamicin within 60 minutes, but one in 500 babies carries the gene that can make the antibiotic cause permanent hearing loss.

The test, developed at Manchester University NHS Foundation Trust is also being considered for use around England through the NHS Genomic Medicine Service.

The test is based on research from the Pharmacogenetics to Avoid Loss of Hearing (PALoH) study, a pragmatic prospective implementation trial that recruited 751 neonates admitted to two ICUs between January and November 2020.

The findings, published in *JAMA Pediatrics*, showed that 424 infants (80.6%) receiving antibiotics were successfully tested for the m.1555A>G variant within 26 minutes. The test demonstrated 100% sensitivity (95% confidence interval 93.9% to 100.0%) and specificity (98.5% to 100.0%), and it identified three babies with the variant who were therefore not given aminoglycoside antibiotic.

The test will prevent hearing loss in an around 180 babies a

The government remains oblivious to the critical need for a workforce plan Jenny Vaughan

The decision to vote down this amendment is a huge, missed opportunity David Wrigley

to the critical need to come up with a workforce plan that stands any chance of actually working for the NHS?"

Missed opportunity

The Hospital Consultant Specialist Association, the hospital doctors' union, called the defeat a major blow to hopes the NHS would get a strategic oversight to workforce planning.

The union's president, Claudia Paoloni, said, "No one in leadership appears to have the bravery or will to compare the numbers we have against the number we need, acknowledge that we must pay and treat our people adequately, and then fund our NHS to deliver this.

"If the government doesn't act on workforce, we will face increasing chaos and declining levels of care."

Adele Waters, *The BMJ*

Cite this as: *BMJ* 2022;377:o871

year and could save the NHS £5m a year by reducing the need for other interventions, such as cochlear implants.

Bill Newman, a consultant in genomic medicine at the trust and professor of translational genomic medicine at Manchester University, led the study. He said, "I am absolutely thrilled with the success of the study—it's going to make a real difference."

Zosia Kmietowicz, *The BMJ*

Cite this as: *BMJ* 2022;377:o887

Mothers and babies died as result of repeated failures

Around 200 babies and nine mothers would or might have survived had they received the right care from Shrewsbury and Telford Hospital NHS Trust, a damning review of the trust's maternity services has concluded.

The Ockenden review, which looked at the cases of nearly 1500 families who experienced maternal or neonatal harm mainly from 2000 to 2019, found repeated shortcomings and failings throughout the services over two decades. These included a failure to follow national guidelines on issues ranging from monitoring fetal heart rate or maternal blood pressure, to management of gestational diabetes, and resuscitation.

The review found a longstanding failure of clinical governance, where a "continual churn" of the executive team and board led to an inability to deliver improvement. A shortage of midwives and doctors meant staff were spread too thinly. Staff described a culture of "them and us" between midwives and obstetricians, with midwives frightened to escalate their concerns. Even when cases were escalated senior clinicians did not always take action.

THERE WERE NOT ENOUGH STAFF, A LACK OF TRAINING, A LACK OF EFFECTIVE INVESTIGATION

The failure to follow guidelines, combined with delays in escalation and a lack of collaborative working, "resulted in the many poor outcomes experienced by mothers or their babies, such as sepsis, hypoxic ischaemic encephalopathy and unfortunately death," said the report.

In hundreds of cases, including deaths, the trust had not carried out serious incident investigations, so lessons were not learnt. Incidents that should have triggered such an investigation were downgraded to a high risk case review (HRCR), "apparently to avoid external scrutiny." HRCRs do not have to be reported to NHS England, the local clinical commissioning groups, or the trust board.

Many cases where mothers or babies had been harmed were not investigated at all, and those that were often failed to identify properly what had gone wrong and missed opportunities to improve safety. The report noted that external body reviews over the years had not picked up the pervasive failings.

The review said some mothers and babies had been harmed by the trust's determination to have a low rate of caesarean sections and welcomed the recent advice to trusts to stop monitoring rates.

Unprecedented review

The size and scale of the Ockenden review is unprecedented in NHS history. It was set up in 2017 by the then health secretary, Jeremy Hunt, after years of pressure from two mothers whose newborn babies had died. In the five year investigation cases were reviewed by multidisciplinary teams of midwives, obstetricians, neonatologists, anaesthetists, and other specialists where relevant.

Donna Ockenden, the senior midwife who chaired the review, said, "Throughout our final report we have highlighted how failures in care were repeated from one incident to the next. For example, ineffective monitoring of fetal growth and a culture of reluctance to perform caesarean sections resulted in many babies dying during birth or shortly after their birth. In many cases, mothers and babies were left with lifelong conditions as a result of their care and treatment.

"The reasons for these failures are clear. There were not enough staff, there was a lack of ongoing training, there was a lack of effective investigation and governance at the trust, and a culture of not listening to the

(Continued on page 48)

POLICE INVESTIGATION

West Mercia police are investigating around 600 maternity cases at the trust to decide whether there is evidence to support a criminal prosecution against the trust or any individuals. The force said the inquiry was "very much active" but no arrests had been made, and the families and the public would be told when there was any further update.

(Continued from page 47)

THE RCOG IS COMMITTED TO BUILDING POSITIVE WORKPLACE CULTURES
Edward Morris

THE NHS WILL BE READY TO DO ALL IT TAKES TO IMPROVE PROVISION OF MATERNITY SERVICES
Layla McCay

IT IS SHOCKING THAT CLINICAL AND MANAGERIAL STAFF FELT UNABLE TO SPEAK OUT
Steve Turner

families involved. There was a tendency of the trust to blame mothers for their poor outcomes, in some cases even for their own deaths."

She added, "What is astounding is that for more than two decades these issues have not been challenged internally and the trust was not held to account by external bodies. This highlights that systemic change is needed locally, and nationally, to ensure care provided to families is always professional and compassionate, and that teams from ward to board are aware of and accountable for the values and standards they should be upholding."

Local and national actions

The trust's first report, published in December 2020, looked at 250 cases and recommended a number of actions to make maternity services safer. The final report identifies more than 60 local actions, as well as 15 "immediate and essential actions" for all maternity services in England.

These include a multiyear workforce investment plan with minimum staffing levels agreed and adhered to, protected time for training, and a clear escalation and mitigation policy when the agreed staffing levels are not met. England's health secretary, Sajid Javid, made a formal apology in parliament to the families who were harmed, and he committed to implementing all of the local and national recommendations.

The report acknowledged a recent funding announcement of £127m by NHS England for maternity services, but it also backed the £200m-£350m recommended by MPs on the Health and Social Care Select Committee last June.

The trust's chief executive, Louise Barnett, offered "wholehearted apologies," adding, "We owe it to those families we failed and those we care for today and in the future to continue to make improvements."

The NHS Confederation's director of policy, Layla McCay, said, "The NHS will closely examine and seek to understand these findings in detail and be ready to do all it takes to improve the provision of its maternity services across the board.

"The review highlights the need for increased investment in recruitment and retention of maternity staff to reduce the pressure on these services, something which NHS leaders strongly support. It also shines a spotlight on the systemic failures that included external bodies and regulators—something which must also be addressed with urgency."

Edward Morris, president of the Royal College of Obstetricians and Gynaecologists, called the review "a watershed moment for maternity services." He added, "The RCOG is committed to enacting change, and a clear focus of this must be to build and maintain safe staffing levels and positive workplace cultures. Protected time of staff training is vital, and this is only possible if there are enough staff.

Steve Turner, registrar at the Royal College of Paediatrics and Child Health, said, "It is imperative that the terrible failings documented here over two decades are understood in order that all of the NHS can learn from them. It is shocking that clinical and managerial staff felt unable to speak out about what was happening for fear of retribution."

Clare Dyer, *The BMJ*

Cite this as: *BMJ* 2022;376:o858

OPINION Richard Vize

Failed to lead, failed to listen to patients, failed to work as a team

Deep soul searching is required by NHS leaders to understand why the same problems keep reoccurring

Donna Ockenden has again exposed common problems underlying NHS scandals: failures in leadership and teamwork, failure to follow clinical guidelines, failure to learn and improve, and a failure to listen to patients.

Failures identified by Ockenden include poor antenatal care for vulnerable women, repeated failures to correctly assess fetal growth, reluctance to refer women to tertiary centres to address fetal abnormalities, poor management of multiple pregnancies, poor management of

OPINION Miles Sibley

NHS refuses to take patient experience seriously

Ockenden's report must, we hope, offer some consolation to the hundreds of families who suffered grievous harm. "For more than two decades," she says, "they have tried to raise concerns but were brushed aside, ignored and not listened to." Ockenden clearly feels deep sympathy for their pain and commends their courage.

But why should patients and families have had to show that kind of courage in the first place? Why did the families at Morecambe Bay have to fight against "a series of missed opportunities to intervene that involved almost every level of the NHS"? Why did women harmed by another recent maternity disaster, at Cwm Taf, find "they were ignored or patronised, and no action was taken, with tragic outcomes including stillbirth and neonatal death of their babies?"

These failings are not only to do with the specifics of maternity care. Those may have been the primary causes of avoidable harm.

gestational hypertension, failure to recognise sick or deteriorating women, failure to act on abnormal fetal heart patterns and failure to escalate concerns.

Shortcomings in leadership and teamwork—important factors identified in Bill Kirkup's 2015 investigation into failings at the maternity unit in Furness General Hospital, Morecambe Bay—included a culture of bullying and a failure by the board to face up to problems. One staff member who tried to raise concerns "was referred straight to occupational health. It seemed that as I dared to raise a concern I must obviously be mentally unwell…This whole conversation was held in public."

Failed to learn

The board failed to understand the depth of the problems, was too willing to put a positive spin on repeated investigations, and lacked a coherent action plan. For two decades, the maternity service and the trust failed to learn from critical incidents.

The review heard from women who had felt a loss of control and power. The feeling of not being listened to sometimes resulted in psychological trauma, with women blaming themselves for not being heard, believing they lacked the courage to stand up for themselves.

For two decades, the maternity service and the trust failed to learn from critical incidents

Women found their dignity and confidence undermined by uncaring remarks, and the trauma of death and difficult births heightened by thoughtlessness.

Ockenden reaches strikingly similar conclusions to Kirkup in 2015. He identified poor working relationships, poor risk assessment, grossly inadequate responses to adverse incidents, inadequate governance and a focus on "normal birth" at the expense of good care.

Two years earlier the Francis inquiry into Mid Staffordshire rehearsed many of these findings. In particular, Francis highlighted a culture of not listening to patients. Like Ockenden, Francis found a culture of bullying which stopped staff speaking out.

The refusal of parts of the NHS to listen to patients was again exposed by Julia Cumberlege in 2020. She uncovered a pattern of women not being heard, not being empowered to make informed choices, and not being believed by arrogant clinicians.

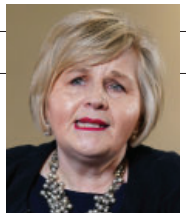
In its response to the Ockenden report, the government has highlighted investment in the maternity workforce, although this is a long way from meeting her demand for "a robust and funded maternity wide workforce plan, starting right now, without delay and continuing over multiple years."

Wider questions may be addressed in the review of health and care leadership in England by Gordon Messenger, which is due to report to ministers in the coming weeks.

But far deeper soul searching by NHS England and clinical and managerial leaders throughout the health service is required if it is to understand why the same problems keep reoccurring with such catastrophic consequences and why mistakes are not seized on as an opportunity to improve.

Richard Vize, public policy journalist and analyst
Cite this as: *BMJ* 2022;376:o860

Colin and Kayleigh Griffiths and Rhiannon Davies and Richard Stanton have fought for decades for a full inquiry into Shrewsbury



Donna Ockenden

But they are compounded by a much bigger problem: the refusal of our healthcare system to take patient experience seriously.

Instead of seeing patient feedback as the foundation for high quality, evidence based care, providers too often see it as a threat. This is what James Jones observed when he described the interests of patients and relatives caught up in the Gosport scandal as being "subordinated to the reputation of the hospital and the professions involved."

Dismissive and arrogant attitudes

It is what Julia Cumberlege meant when, in reporting on the thousands of women and babies injured by Primodos, sodium valproate, and pelvic mesh, she described "a culture of dismissive and arrogant attitudes that only serve to intimidate and confuse."

It is what Robert Francis exposed when, in the Mid Staffordshire inquiry, he said that "for all the fine words printed and spoken about candour, and willingness to remedy wrongs, there lurks within the system an institutional instinct which, under pressure, will prefer concealment, formulaic responses, and avoidance of public criticism."

Time and again—independently of one another—these reports come to the same conclusion: that an NHS which is meant to be both person centred and evidence based will not, when the chips are down, treat patient feedback as evidence.

Healthcare is a high risk business. But within every major recent scandal, there has been an element, not of error, but of intent.

At Shrewsbury and Telford, Ockenden found, "the maternity governance team inappropriately downgraded serious incidents to a local investigation methodology to avoid external scrutiny." That was not a mistake. Somebody thought that through.

At Gosport, "The obfuscation by those in authority…made the relatives of those who died angry and disillusioned." Obfuscation is not a mistake. It is a deliberate attempt to deceive.

Mistakes in healthcare might be inevitable—but disasters are not. And learning from them means looking for uncomfortable truths about the ways in which we—with full intent—treat patient experience and feedback. None of these providers are "bad apples." They all take their cue from an overarching culture which sees patient experience as having little value.

Evidence for this is plentiful: patient experience is noticeable by its absence from the National Core Content, the research databases that are made available to all NHS staff because they are deemed essential for evidence based practice; patient experience staff—almost uniquely in the NHS—have no systematic training or qualifications; Healthwatch, set up to strengthen the patient voice network has seen its funding cut by 50% since its inception.

These are not mistakes—they are decisions. They send the clearest signals that the work of patient experience staff is not that important.

We can do better—we must.

We should learn from mistakes at Shrewsbury and Telford and elsewhere. But we also need to ask some searching questions about intent—specifically how we mean to build an NHS that is person centred and evidence based.

Miles Sibley, Patient Experience Library
Cite this as: *BMJ* 2022;377:o875

THE BIG PICTURE

Shanghai shuts in covid surge

The force of the omicron BA.2 variant last week met the immovable object that is China's zero covid policy as Shanghai locked down amid the country's worst outbreak since early 2020.

About nine million residents of Pudong, the eastern half of Shanghai, have been locked down since 28 March. Bridges across the Huangpu River are closed (right). On the other bank, roughly 15 million people around the historic area of Puxi, began a lockdown on 1 April as Pudong reopened. The two step lockdown was to allow mass testing in each area.

In Puxi, a robot patrolled the streets, announcing the new schedule. In Pudong, residents were warned that drones with facial recognition technology would identify those illegally outdoors.

Shanghai reported a record 5962 new cases on 30 March, up from 4477 the day before. But internationally it is reporting only symptomatic cases.

China's current wave remains tiny by international standards, with only two deaths reported so far this year. Even if China were reporting its asymptomatic cases internationally, it would have under three cases for each 100 000 people a day over the past week compared with 128 cases for 100 000 people a day in Hong Kong, or 672 of 100 000 in South Korea, which has no zero covid strategy.

Owen Dyer, Montreal

Cite this as: *BMJ* 2022;376:o859

Volunteers deliver necessities to locked down Shanghai residents on 28 March

ALEX PLAVEVSKI/EPA-EFE/SHUTTERSTOCK

EDITORIAL

Crowdfunding BMJ's investigative journalism

Expanding our impact through donations

The BMJ is now more than a scholarly journal, and for the past decade we have pursued investigative journalism as a powerful lever for improving health by exposing failings in the system.[1] Over the past year we have substantially expanded our coverage, publishing 16 investigative stories (bmj.com/investigations), including a series that won a British Journalism Award,[2] and worked with a greater number of international journalists.

We have reported the disclosures of a whistleblower working on the Pfizer covid-19 vaccine trial,[3] a story that unexpectedly led us to confront Facebook over the way it deals with misinformation on its platform.[4] We have probed the implications of mRNA instability in vaccines and asked serious questions about Russia's Sputnik vaccine.[5 6] Beyond covid, we have tackled concerns in global health, including polio eradication, and asked whether health institutions should still be investing in fossil fuels.[7 8]

A powerful force

In a world marred by crises, investigative journalism is more important than ever. Vested interests are undermining clinical care and scientific integrity. Medical products of questionable benefit are widely used. Equitable healthcare is undermined by systemic injustices, a society fractured by deep social divisions, and faltering trust in traditional institutions.

Too much medical reporting today is produced quickly and driven by press releases, leading journalism away from its critical traditions of objectivity and challenging authority. In our view, investigative journalism is a powerful force for change that thrusts a problem into the spotlight and keeps it there until meaningful reform happens.

BMJ INVESTIGATION

Pfizer's covid vaccine trial: researcher blows the whistle on data integrity concerns

Revelations of poor practices at a Texan company working on a phase III study raise questions about handling of data and regulatory oversight. **Paul D Thacker** reports

The small highlighted more than 100 outstanding queries elder

There are many more stories that need to be written

Journalism may seem like the job of newspapers, but medical journals have a vital part to play. At *The BMJ*, we externally peer review our journalism and often seek commentaries and further analysis on our findings. The approach strengthens our reporting and, by directly reaching health professionals, policy makers, and civil society, can drive real change.

The BMJ's journalism conforms to the highest standards. It must be accurate, relevant to our broad readership, and true to our values of being evidence based, patient centred, open and transparent, and courageous. Our purpose, as with our other content, is to create a healthier world by improving outcomes related to health and wellbeing for people and the planet.

Producing high impact investigations is slow and expensive. Many leads do not pan out. Other story ideas may come to us in a complex, somewhat convoluted form and can require great effort just to unpick and fully understand. The full operation involves a team of journalists, editors, lawyers, and expert reviewers. At present, we cannot tackle all the potential stories that come across our desk or dedicate time to follow up published stories.

To grow, we need further financial support beyond the investment already made by *The BMJ*. In the past two years, we have secured no-strings philanthropic funding from Arnold Ventures, a US based organisation, and William McGuire, a former health executive. This generous funding has enabled us to begin scaling up the BMJ Investigations Unit, doubling in size by hiring a new editor and reporter, as well as growing our international pool of freelance investigative journalists. Funding also helps make investigations freely available.

But there are many more stories that need to be written, and it will take substantial new funds to recruit the additional journalists, data scientists, and fact checkers to meet our ambition of producing 10 major stories a year. This is where we hope that our readers will be able to help. While we will continue to seek out large philanthropic donations, *The BMJ* is also considering a crowdfunding model to raise small donations, up to a predefined limit, from readers around the world. These donations will be ringfenced to support investigative journalism. The editorial team will not be privy to the names of those who donate through the online mechanism. Those wishing to make a large donation are encouraged to speak to us directly.

Unmet need

This is the same crowdfunding model used by Wikipedia, the *Guardian*, and many other media outlets. We require any funder or donor to maintain a strict "hands-off" policy with regard to our investigative journalism. *The BMJ*'s investigative journalism is striking a chord, with record breaking traffic to bmj.com, reaching an audience often way beyond our traditional readership. It is clear that our work is filling an unmet need that perhaps only a medical journal with a focus on investigative journalism can achieve. We'd welcome your thoughts on our plans.

Rebecca Coombes, head of journalism rcoombes@bmj.com

Peter Doshi, senior editor, *The BMJ*, London, UK

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Find the full version with references at http://dx.doi.org/10.1136/bmj.o803

EDITORIAL

A two tier healthcare system in the UK?

Limited capacity in the private sector makes it unlikely for now

Extrapolation from a recent poll suggests that about 16 million adults in the UK found it difficult to access healthcare services during the pandemic, and of these, one in eight opted to access private healthcare.[1]

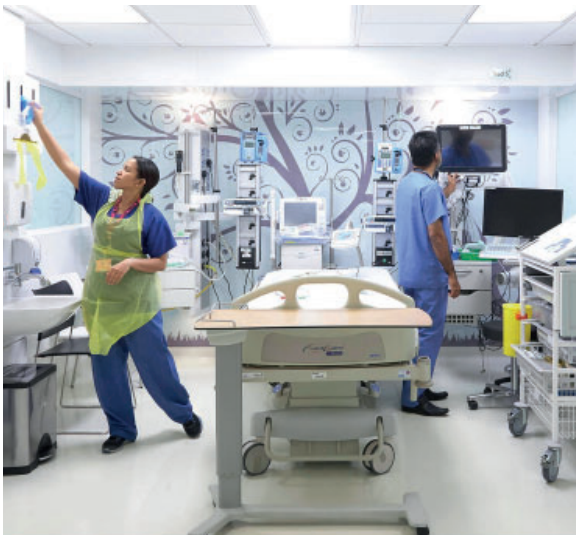
This could create the conditions for a two tier system, whereby those with the means to pay have access to healthcare more quickly than those who don't. This would jeopardise the high levels of support the NHS has enjoyed since its establishment and have serious implications for equity in access to healthcare services.

About 7% of the UK population have private medical insurance.[4] Policies are mostly sponsored by employers and can be used to access certain specialist services. The number of private insurance policies peaked in 2008 at 4.4 million, but this has since declined to just under four million.[5] Even with this decline, claims on insurance policies still generate around half of total revenues for private hospitals.[6]

Self-paying market

A further 20% of revenue comes from people paying for private healthcare out of their own pocket. Before the pandemic, the self-pay market grew by about 7% a year between 2010 and 2019.[7] The remainder of revenue for the private healthcare sector comes from NHS funded patients, who accounted for about 30% of private hospitals' income in 2019.[6] Total revenue in the private healthcare sector actually decreased in real terms by 2.1% and 0.5% in 2017 and 2018, respectively, followed by a 3% increase in 2019.[6]

Over the next decade, the biggest challenge for the NHS is tackling the massive backlog of elective care. By December 2021, over six million people were waiting for treatment in England alone, two million more than before the pandemic.[8]



CURTSEYES/ALAMY

The private healthcare sector is facing many similar challenges to the NHS

Michael Anderson, researcher, London School of Economics and Political Science
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Some fear these challenges could accelerate expansion of the self-pay private healthcare market and risk a two tier healthcare system as wealthier people seek to circumvent NHS waiting lists.

However, this may be realistic only in London and southeast England, where coverage by private medical insurance is already heavily saturated and unlikely to expand further. These two regions account for just under half of all spending on medical insurance in the UK.[9]

Forty eight of 190 private hospitals in the UK are in the greater London area.[6 10] They generate just under half of all revenue from privately funded patients nationally.[10] This is because most private hospitals outside London offer only high volume, low complexity procedures such as hernia and cataract operations,[11] whereas several hospitals in London provide more complex and expensive healthcare services. For most people living in other parts of the UK, the NHS is the only option for most complex types of care.

In reality, the private healthcare sector is facing many similar challenges to the NHS when it comes to increasing capacity, including covid-19 infection control protocols that limit the efficiency of theatres and loss of workforce because of staff sickness and self-isolation. They also share the same workforce as NHS hospitals and are recruiting from the same limited supply of healthcare staff—the UK has fewer doctors and nurses per head of population than most other high income countries.[12] Therefore it is not surprising that data from the Private Healthcare Information Network show that in the first half of 2021 the number of private hospital stays—whether funded publicly (233 000) or privately (310 000)—had not yet fully recovered to pre-pandemic levels.[13]

Stagnation of private insurance

The potential for a two tier healthcare system has caused tension since the establishment of the NHS. Given the stagnation of the private insurance market and limited scope for more patients to self-fund because of rising living costs, a substantial shift towards a two tier system is unlikely over the next few years.

Instructive parallels can be drawn between what's happening in the NHS now and what happened two decades ago. In the early 2000s, it was not uncommon for patients to wait over a year for specialist treatment after referral from a general practitioner,[14] and the proportion of healthcare expenditure that was privately funded (25%) was even higher than it is now.[2] Substantial investment in the NHS slowly reduced waiting times over the subsequent decade. NHS England recently launched a similarly ambitious strategy to cut waiting lists to pre-pandemic levels within three years.[15] Now, however, lack of a properly funded long term workforce plan to deliver the healthcare staff required is a glaring omission that could slow or even derail the recovery.

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COVID-19

Airborne transmission: Are CO_2 monitors a long term solution or "pandemic hack?"

Carbon dioxide monitors have emerged as a cost effective way to tell how well ventilated an indoor space. **Chris Baraniuk** asks what evidence supports their use.

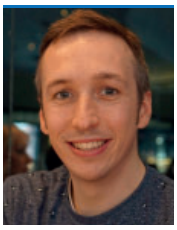
There is ample evidence that SARS-CoV-2 can become airborne and that ventilation reduces the risk of transmission, but the difficulty is what to do about it. For all the sensitivity of the human senses, our eyes and ears cannot tell us whether the air in a room is full of aerosols harbouring SARS-CoV-2.

But what if we could measure the freshness of that air and, therefore, get a rough idea of how safe we'd be in a particular indoor space—or at least how well ventilated it is?

Carbon dioxide monitors, which measure concentrations of the gas in parts per million (ppm), have emerged as one way to do that. The gas levels build up when people exhale indoors but can remain low if a space is well ventilated. The idea is that a CO_2 reading provides an immediate, understandable proxy or surrogate measurement of ventilation and, by extension, an indication of the risk that SARS-Cov-2 aerosols might be accumulating in that space.

Various countries around the world have used these devices to give some sense of how safe an indoor space is during the pandemic. Japan is one of the most prominent, with CO_2 monitors installed in shopping centres, cinemas, and offices. In Washington State in the US, restaurants and bars have used the devices when setting up covered outside seating areas "to ensure adequate exchange with outdoor air."

In the UK, the government has distributed more than 350 000 monitors to schools in England to help teachers identify classrooms or other indoor spaces that are poorly ventilated. According to the CoSchools project—from the universities of Cambridge and Surrey, and Imperial College London, which assisted the government programme—a CO_2 reading of 800 ppm or lower is indicative of good ventilation.



Monitors can help identify places that require better ventilation
Matt Butler

Matt Butler, a consultant geriatrician at Cambridge University Hospitals, who is using the monitors in a hospital study, says they can help building managers identify places that require better ventilation.

CO_2 monitoring is not currently mentioned in the UK's official infection prevention and control guidance for health and care settings. The guidance does, however, stipulate the need to evaluate the quality of ventilation in such settings.

Evidence base

Our understanding of how CO_2 monitors, specifically, can help in the pandemic is arguably still nascent.

In one study in Belgium, researchers installed monitors in 12 patient rooms at Imelda Hospital in the municipality of Bonheiden and told staff to try and keep readings below 800 ppm by, for example, opening windows and reducing crowding. But this was easier said than done. "We identified significant barriers towards implementation, mainly patients complaining of the cold and draught discomfort from increased ventilation, as well as lack of attention drawn by the monitors," the study authors wrote.

A separate study in Italy reported that implementing a ventilation protocol, which included the use of monitors, resulted in lower average CO_2 levels in school classrooms. The researchers of that study did not, however, specifically evaluate whether this was also associated with lower SARS-CoV-2 transmission among pupils and staff.

Butler and colleagues are beginning a study at Addenbrooke's

HEPA filters and CO_2

HEPA grade air filtration systems have emerged as one of the recommended ways to make spaces safe from SARS-CoV-2. Early tests by Matt Butler, at the University of Cambridge, and colleagues have confirmed that they remove viruses, fungi, and bacteria from the air as intended. But it's important to note that HEPA filtration doesn't actively remove CO_2 from the air, so in theory the CO_2 level in a room could remain elevated while the air is made safe. Butler's team is using CO_2 monitors to track air freshness over time to see whether that also has any relation to cases of infection.

HEPA devices could still affect CO_2 concentrations, says Butler. The machines produce a breeze, potentially distributing CO_2 and any pathogen carrying aerosols that remain in the air around the room more evenly.

"Exhaled breath hangs in pockets like drops of ink in a bathtub," he says, "The HEPA acts like a whisk to the bath water."

WLADIMIR BULGAR/SPL/ALAMY

Hospital in Cambridge that will track patient infections on two wards—one that has a HEPA filtration system (box) and one that does not.

Not everyone is convinced, however, that we should rely on CO_2 monitors to give us an indication of covid-19 safety.

The devices are merely a "pandemic hack," a short term solution, argues Angela Eykelbosh, environmental health and knowledge translation scientist at the British Columbia Centre for Disease Control's National Collaborating Centre for Environmental Health. "When somebody says to me, 'Can I use CO_2 as a proxy for covid risk?' I say, 'No, how do you know how many infected people are in the room?'"

In 2021, Eykelbosh published a report on the use of CO_2 monitors during the pandemic that referenced examples from many countries. She concluded that CO_2 readings should not be interpreted as a proxy for covid risk given, among other reasons, the lack of strong evidence for a direct link between indoor CO_2 concentrations and covid-19 transmission, and the imprecision of monitors. Speaking to *The BMJ*, she added that to suggest a low reading shows, definitively, that there is a low covid-19 risk in an indoor space such as a cinema would be akin to "hygiene theatre."

"As long as people can understand and hold on to the idea that a low CO_2 level means that it's well ventilated and their risk is minimised, OK," she adds. "But if this is incorrectly communicated so that people are understanding that number on the screen as covid risk, then it's a disservice to the public."

Julian Tang, clinical virologist in respiratory sciences at the University of Leicester, agrees with the caveats. "Clearly, if you have more people infected in that space you could have CO_2 levels that are relatively low but the virus concentration would be higher," he says.

CO2 readings should not be interpreted as a proxy for covid risk
Angela Eykelbosh

We don't dispense with interventions just because of a lack of uniformity
Julian Tang

He points out, however, that a lack of uniformity dogs all non-pharmaceutical interventions, including masks and social distancing. That doesn't mean we simply dispense with them, he says, adding that, overall, better ventilation and indications thereof are useful.

Sage advice

Clearly, improved ventilation does not prevent someone from catching covid-19 when they sit or stand in front of an infected person while they speak or sing, for example, since that would bring the uninfected person into contact with sprayed droplets containing the virus.

In a paper about the relation of ventilation to covid-19 transmission published in October 2020, the UK's Scientific Advisory Group for Emergencies (SAGE) noted that the significance of a CO_2 reading is dependent on context. In a large, sparsely occupied space, there is greater uncertainty over CO_2 readings, for instance.

"Continuous CO_2 monitoring is not likely to be a reliable proxy for transmission risk in most environments," SAGE concluded. It added, however, it might be a better indicator in places where the same group of people regularly attend, such as offices and schools. Models suggest that, if you double the ventilation, you halve the amount of virus present, wrote SAGE in its paper.

For Eykelbosh, there is a risk of getting bogged down in monitoring CO_2 levels arbitrarily when we should concentrate on improving air quality overall. "I don't want to see classrooms with CO_2 sensors stuck up on the wall when what they should have is proper ventilation," she says.

But Adam Squires, Bath lead for the Engineering and Physical Sciences Research Council Centre for Doctoral Training in Aerosol Science, emphasises that CO_2 monitoring can be part of our transition towards better ventilated indoor spaces. "CO_2 monitoring definitely does assess levels of exhaled breath," he says, "That does correlate with increased transmission."

For Butler, that's what really matters, rather than obsessing over specific readings and the outcomes that may or may not be associated with them. "In a hospital, we're almost always less than 800 ppm but we've still seen infections," he says. Tracking CO_2 levels can still be reassuring despite this, he argues, because the readings can give a rough idea of how much fresh air is entering a given space. More of that is, generally, better than less.

Despite all the caveats with CO_2 monitors, there remain few other ways in which people can gauge indoor air quality. Indeed, the bigger need is raising public awareness around the importance of ventilation in the first place. Referring to covid prevention protocols, Butler says, "It's taken us two years in the UK to begin to move away from thinking it's about hand washing and cleaning of surfaces—in fact, I think we're still very much there." CO_2 monitors at least help to "make an invisible problem visible," he says.

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UKRAINE

Poland's buckling health system is still welcoming Ukrainian refugees

Since Russia's invasion, an estimated two million refugees have crossed the border to Poland, a country with one of the lowest per capita healthcare spends in the EU. **Sally Howard** reports

Over two million Ukrainian refugees have crossed the Polish border, with a further one million crossing into neighbouring countries, according to the United Nations High Commissioner for Refugees (UNHCR).

Arrivals are mainly women, children, the elderly, and, increasingly, the physically vulnerable (most Ukrainian men aged 16-60 are banned from leaving the country in case they are called on to fight). They arrive with a range of physical and mental health needs; many have missed days or weeks of long term treatments such as insulin and thyroid drugs.

In a statement on 3 March, the Polish health ministry said that, while most refugees were in good health, it had prepared 7000 places for Ukrainian citizens across 120 hospitals. Some 700 children had been treated in Polish hospitals by 13 March, including for respiratory diseases from the conditions they had lived in under bombardment.

The Polish government has established eight reception points for refugees along its border with Ukraine, from Przemyśl in the south to Dorohusk in the north, which provide food, medical aid, and information to refugee arrivals. At these points, healthcare workers focus on triaging cases, says Selma Sevkli, who is coordinating the World Health Organization's mental health and psychosocial support services for refugee arrivals in Poland.

She says uncertainty remains about how to plan an integrated health response that will not overwhelm Polish national services, particularly with many refugee arrivals being assisted by volunteers, including volunteer healthcare workers. "It's hard to know who will remain in the country to help and it's also hard to know how many refugees will remain in Poland medium term or exit to other European nations," Sevkli says.

Uncertainty remains about how to plan an integrated response that will not overwhelm Polish services

Medical needs

"The Polish healthcare service, from what I see, is doing exceptionally well with the refugee situation," says Roman Clegg, a Ukrainian doctor at UCLH in London, who is organising shipments of medical supplies to his home country through his charity Medical Aid Ukraine.

He says the major problems faced at refugee reception centres are missed medicines for chronic conditions such as diabetes and hypothyroidism. Supplies around 1000 visits a day, also offers medical document translation through volunteer translators.

Krzysztof Chmiel, a general practitioner in Krakow, found the link to Lekarze dla Ukrainy on Facebook and has treated 20 refugees in person through the service.

"There are around 130 000 refugees in my city," he says, "I'm not a soldier, all I can do is provide healthcare so that is what I do."

ZBIGNIEW MEISSNER/EPA-EFE/SHUTTERSTOCK

POLISH HEALTHCARE STEPS UP

Poland has a free public healthcare system in which every Polish and European Union resident has the right to accessible healthcare. In 2015, health expenditure was 6.3% of gross domestic product compared with the EU average of 9.9%.[1] Public funds account for 72% of spending, lower than the EU average (79%). Out-of-pocket spending, meanwhile, is comparatively high (22%), raising accessibility concerns.

Poland has few doctors, especially specialists,[5] and the country ranks fifth in the EU for unmet healthcare needs, with cost and waiting times being the biggest contributors.[1] "We are one of the lowest ranked in Europe in terms of the number of doctors for each 1000 inhabitants and healthcare expenditures," says Jerzy Wydmański, an oncologist based in the southern Polish city of Gliwice.

Nevertheless, those in need are not turned away. Wydmański has been helping Ukrainian refugees in person and by telemedicine elsewhere in Poland. His son, Witold, an IT student in Kraków, created an online platform, Lekarze dla Ukrainy (Doctors for Ukraine),[6] to help Ukrainian refugees connect with Polish doctors who are offering free consultations and advice. The site, which has been receiving

JAKUB STEZYCKI/REUTERS/ALAMY

Refugees arrive in Korczowa, Poland on 4 March after crossing from Ukraine

are "very affected" in Ukraine, he says, particularly insulin.

Nadia Kravchuk, a Ukrainian doctor based in Singapore who is now volunteering near the border crossing in Przemyśl, says, "We've seen many urinary tract infections in women who had not urinated for days because of the stress of evacuation, a number of miscarriages also caused by stress, and lice infestations at refugee centres."

While most arrivals are in need of emotional support, medical needs are becoming increasingly complex. Sarah Tyler, communications spokesperson at WHO, recently returned from border crossing points at Medyka and Dorohusk. "We met amputees in refugee reception centres and a paraplegic who had to be carried across the border," she says.

Ukrainians who initially stayed and hoped for a cessation of war are now managing to leave and arrivals are making it through from Mariupol, a city in south-eastern Ukraine that is under Russian control. Kathy Morton, a Manchester locum GP who has been volunteering near Przemyśl, says, "In recent days we have seen a deaf family, a group of evacuated oncology patients, and a pregnant woman with insulin dependent diabetes who hadn't been eating properly and had developed significant hyperglycaemia."

UNHCR told *The BMJ* that with the arrival of older and vulnerable refugees, it was important to prevent communicable diseases outbreaks in crowded accommodation, including covid-19.

Refugee arrivals in Poland also face significant administrative and language barriers to accessing medical care. Polish doctor Jerzy Wydmański says that many refugees he meets are "embarrassed and confused about the situation they find themselves in," adding to the psychological barriers to them accessing care.

Olena Oleksandrivna is a Ukrainian paediatrician based in Łódzkie Voivodeship in central Poland. Since February 2022 she has found herself helping her fellow nationals navigate medical administration. "They need vaccinations and prescriptions but don't know the language and don't have the PESEL identification number necessary in Poland to make an appointment with the doctor," Oleksandrivna says.

PESEL also allows holders to apply for social assistance, access the education system, and start a company in Poland, as well as access medical care. On 16 March, Ukrainian refugees were given the opportunity to apply for a PESEL number and within seven days 123 000—6% of arrivals—had received one.

Clegg says the many British doctor volunteers helping refugees in Poland and remotely by teleservices are serving administrative rather than healthcare needs. "British and British-Ukrainian doctors are more and more involved with assisting people with filling in forms rather than helping with health matters—because that's where the need is," he says. "That includes helping with the absurd Home Office red tape for refugees who want to come to the UK."

What next?

As the refugee flow continues, the Polish health ministry is cooperating with the European Commission (EC) and the French presidency of the EU on the relocation of arriving refugees who need hospital care, including 10 000 beds allocated by the EC for this purpose in other EU member states.

WHO meanwhile is coordinating healthcare and mental healthcare "clusters" in Poland to prevent undue pressure on the receiving country, a spokesperson told *The BMJ*. The agency is working with the Polish healthcare system to set up digital data gathering services, track covid-19 vaccinations, allow prescriptions to be migrated between the two healthcare systems, and notify departing refugees of what they need to bring with them to ensure continuity of care. WHO is also mapping remote provision of telemedicine support, they said.

Sevkli says the Polish healthcare response now needs to move from an acute phase of focusing on medical need at borders to longer term integration—and one that takes into account that volunteers cannot offer their services indefinitely.

"We need to learn from failures in humanitarian healthcare responses elsewhere and not duplicate services," she says, adding that non-governmental organisations should coordinate with the two countries' national health systems to plug gaps where there is already unmet need in Poland, such as mental health, neurology, and paediatrics.

In a rare bright spot over the past few weeks, Poland simplified the procedure for medics from Ukraine to start working in Poland as part of the government's Special Act of Assistance to Ukrainian Citizens. On 15 March, the Health Ministry announced that it is launching free language courses in medical Polish for arriving healthcare professionals. Among the thousands of arrivals across the border are healthcare workers who may boost capacity in a system that desperately needs a larger workforce.

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The health needs of refugees from Ukraine

Since Russia's reinvasion of Ukraine on 24 February, more than 4 million people have fled the country. Seeking safety from escalating violence, most refugees have gone to the neighbouring countries of Poland, Slovakia, Hungary, Romania, and Moldova.

By far the largest number are in Poland, which as of 29 March had welcomed over 2 million refugees. This vulnerable population will have both immediate and long term healthcare needs.

Martial law has prevented men aged 18-60 from leaving Ukraine so the vast majority of refugees are women, children, and older people. Many early refugees are staying with family or friends in host countries, but as the violence escalates, more refugees without connections are fleeing and require the most assistance. They often arrive cold and dehydrated, some having travelled for days. The harsh and overcrowded conditions endured during their journey and in reception centres make them susceptible to infectious diseases. Children are at particular risk of measles, polio, and other vaccine preventable diseases, including diarrheal diseases.

Routine vaccination coverage in Ukraine was low before the war, and the rotavirus vaccine is not routinely given. Cramped conditions also make refugees vulnerable to covid. Before the war Ukraine had almost 25 000 new cases a day, with only 36% of the population fully vaccinated. As these diseases spread quickly in crowded settings, prevention measures including hygiene and masks, vaccination, and effective surveillance are priorities.

Women's health

Women escaping Ukraine need access to sexual and reproductive healthcare. The World Health Organization anticipates 2000 births among refugees from Ukraine in the next four weeks, with numbers rising as more refugees arrive. It estimates that at least 15% will require emergency obstetric care.

Women are also at high risk of gender based violence and trafficking. The UN Population Fund is working hard to get refugee women to appropriate antenatal care, and provide other reproductive health services, including care for GBV victims, and supplies for menstrual hygiene and contraception.

It is also essential to address the needs of refugees with the pre-existing chronic conditions. Chronic non-communicable diseases are the biggest contributor to disease burden among Ukrainian adults. About a third have hypertension and 7% have diabetes. Ukraine also has one of the highest burdens in Europe of chronic infectious diseases, especially HIV and tuberculosis.

DANIEL DERAJINSKI/ABACA PRESS/ALAMY

Ukraine's neighbours cannot take on the responsibility for refugees alone

Effective management is only possible if those affected have continuous access to medicines and care, both challenging for refugee populations. Most refugees arrive without medical records or adequate supplies of medication. In some cases, this can be a matter of life or death, as with insulin for type I diabetes or diuretics for heart failure. Those with chronic renal failure require immediate and ongoing dialysis. Refugees with cancer face particular challenges; breaks in care may allow cancers to spread, but management is often complicated and requires detailed knowledge of the progress of the disease, with the added challenge of differences in treatment across countries.

Older refugees, many of whom will have multimorbidity and suffer from frailty, and those with disabilities are particularly vulnerable. These people are often given low priority and face many barriers to accessing care. A survey of older refugees from Ukraine in Moldova found that 28% required urgent medications, including for diabetes, hypertension, and pain relief, but more than a third had no access to the money needed to purchase them.

Finally, exposure to traumatic events and ongoing daily stressors means that one in five people affected by conflict are likely to experience mental disorders. These cover the whole spectrum of disorders and severity so those supporting them will need the skills to manage a wide range of mental health needs. There is now considerable experience that can be drawn on, providing mental health and psycho-social support programmes (MHPSS) and integrating them with health, education, and social protection programmes, complemented by more targeted community mental health interventions.

The key to a comprehensive, relevant, and sustainable MHPSS response is multi-sectorial coordination. Central to such efforts should be the involvement of Ukrainian refugees, particularly those with lived experience of mental disorders.

International resources

Responding to these health needs will require significant resources. The United Nations High Commissioner for Refugees coordinates the response with national authorities and other UN agencies and non-governmental organisations. But it is the host countries that will provide most healthcare, especially in the long term.

Their responses thus far have been commendable. Two days after the Russian reinvasion, Poland offered all refugees escaping the war access to the same health care as Polish citizens under their national health fund. Moldova, one of the poorest countries in Europe, has received the most refugees from Ukraine per capita and is offering them free access to health services, including vaccination against covid-19 and other vaccine-preventable diseases. The European Commission has enacted the Temporary Protection Directive, offering immediate protection, including medical assistance, to refugees from Ukraine.

Russia's aggression is unlikely to end soon. As the violence continues, there will be many more people forced to flee. So far, Ukraine's neighbours have willingly taken on most of the responsibility of supporting those fleeing the war. But they cannot do it alone. One lesson of the pandemic was the importance of European solidarity. This is a test of whether we can turn this idea into a reality.

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