“Sure Start cut child hospital admissions”

Around 13 000 admissions of children to hospital each year were likely to have been prevented by the work of the Sure Start children’s centres that were set up across England in 1999 to support parents of young children, the Institute for Fiscal Studies has concluded.

In a report published on 16 August the institute examined the effects of the Sure Start scheme on children’s health up to the age of 15. The centres were created to bring together health, parenting support, and parental employment services into one place for families with children under 5.

At its 2010 peak Sure Start received more than £1.5bn a year for around 3600 centres. But by 2017-18 funding had fallen to £600m and many centres were closed, scaled back, or integrated into family hubs, a more recent initiative designed to improve vulnerable families’ access to services.

The researchers focused on the 2000s, when the programme was expanding, using existing data on the centres, their users, and hospital episode statistics. They acknowledged that, initially, hospital admissions of children at the age of 12 months increased. But they said these early rises were outweighed by reduced admissions throughout childhood and adolescence. The largest effects were seen among boys in poorer areas.

At its peak in 2010 Sure Start cut hospital admissions at age 5 by 7%, translating to around 2900 fewer a year, the researchers estimated. Moreover, these long term benefits persisted as children grew, and the authors calculated that more than 13 150 admissions of 11 to 15 year olds a year were prevented, representing an 8% fall in admission rates before Sure Start began.

The report said, “After the first few years, Sure Start decisively reduces hospitalisations, with stronger immune systems, better disease management, safer home environments and fewer behavioural problems all potentially playing a role.”

The authors said their work should inform the government’s response to the recommendations in Andrea Leadsom’s recent report on the first 1001 days of life.

Sarah Cattan, associate director of the Institute for Fiscal Studies and a report coauthor, said, “Ahead of this autumn’s tight spending review, these results are a reminder that policymakers should consider a programme’s potential for long term savings, not just its upfront costs.”

Adrian O’Dowd, London

Cite this as: BMJ 2021;374:n2032

At their peak, Sure Start centres helped prevent around 2900 children aged 5 years being admitted to hospital, says the IFS report
Doctors have faced “worrying levels of abuse” in past month, BMA reports

Just over half (51%) of GPs and 30% of hospital doctors have experienced verbal abuse, a BMA survey of 2478 doctors and medical students in England, Wales, and Northern Ireland has found.

A fifth of the GPs reporting being threatened personally, and half of all respondents had witnessed violence or abuse against other staff—this rose to two thirds of GPs, nearly all (96%) of whom said reception staff were targeted.

Most respondents (75% of GPs and 54% of hospital doctors) said the abuser was dissatisfied with the service or access.

Richard Vautrey, chair of the BMA’s General Practitioners Committee, said abuse can have a profound effect on doctors’ wellbeing and leaves them questioning their career at a time when the NHS can ill afford to lose any more staff. He has called on the government and NHS England to have an “honest public conversation” about the “precarious state the NHS now finds itself . . . so that people have realistic expectations, and to prevent staff bearing the brunt of frustration and anger.”

Elisabeth Mahase, The BMJ/ Cite this as: BMJ 2021;374:n1977

Covid-19

New rules on self-isolation are welcomed by trusts

Chris Hopson, chief executive of NHS Providers, said he hoped that changes to rules on self-isolation in England would help improve staffing levels at trusts, as from 16 August people who are double jabbed do not need to self-isolate when identified as a close contact of someone who tests positive for covid-19. Since mid-July NHS and other care staff who were told to self-isolate have been allowed to work in “exceptional circumstances” if they are fully vaccinated and return a negative PCR test, but the effect on staffing has not been as great as anticipated, said Hopson.

PPE providers on fast track will be named

After a complaint to the Information Commissioner’s Office, the government said it will publish the names of companies contracted to provide PPE when they were placed on a fast track “VIP lane” by officials. Contracts worth billions were awarded to companies with little or no experience in PPE supplies and without competitive tender. In November the National Audit Office found that suppliers referred to the VIP lane were 10 times as likely to be awarded a contract as those that came through the ordinary lane.

Charity offers scholarships to bereaved children

The Healthcare Workers’ Foundation, set up in March 2020 to support the relatives of healthcare workers who died during the covid pandemic, is offering education scholarships worth £5000 a year to NHS staff’s bereaved children who are going on to higher education. The foundation says that the sudden loss of a loved one can leave families struggling financially as well as emotionally, and it hopes that the funding can help restore some of the security these children have lost.

Vaccines

WHO: ban booster shots until end of September

The World Health Organization called for a moratorium on covid booster shots until the end of September and for wealthier countries with wide vaccine coverage to send doses to others that face shortages. In Africa, which saw deaths rise by 80% from 19 to 30 July, only 2% of people are fully vaccinated. In the UK the Joint Committee on Vaccination and Immunisation’s interim advice says the most vulnerable people could be given a booster from next month.

US authorises booster for organ transplant recipients

The US Food and Drug Administration will allow a third, booster dose of Pfizer-BioNTech and Moderna vaccines for people who have received a solid organ transplant or are similarly immunocompromised. The booster should be given at least 18 days after the second jab of a two dose regimen. The Pfizer vaccine is approved for people aged 12 and over; the Moderna vaccine for ages 18 and over. Immunocompromised people should continue masking and social distancing, the FDA advised, and if exposed to covid they should ask their doctor about monoclonal antibody treatment.

Pay award

BMA will survey trainees over industrial action

Junior doctors in England will be surveyed on whether they wish to consider any form of action over the government’s decision to exclude them from a 3% pay rise for NHS staff, the BMA said. The doctors’ contract includes an annual 2% pay uplift for four years, but the BMA has argued this agreement was made before the covid pandemic. Excluding trainees from the 3% deal was “nothing short of insulting,” said Sarah Hallett (below), chair of the BMA’s Junior Doctors Committee.

NHS funding

Fund care for discharged patients, agencies demand

NHS Providers, the NHS Confederation, and other organisations wrote to the health secretary and chancellor, urging them to continue funding “discharge to assess” schemes, which guarantee four weeks of care support to every patient discharged from hospital. Since April the schemes have received £600m and have helped to fund 30 000 beds and 6000 staff. Funding cuts in October would mean a “cliff edge” for discharge care, they warned.
Antimicrobials
GP's efforts failed to curb drug resistant E coli
Researchers called for a more radical, multisectoral approach to halting the rise in drug resistant Escherichia coli infections in England after finding that incentivising GPs to cut antibiotic prescribing on its own was insufficient. Their findings, published in Lancet Infectious Diseases, show that, while NHS England’s “quality premium” scheme—introduced in 2015 to reward groups of GPs for reducing inappropriate antibiotic prescribing—did reduce antibiotic prescribing, it brought only a modest reduction in antibiotic resistant infections of E coli.

Drug policy
Scotland intends to set up safe consumption rooms
The Scottish government is to defy Westminster and set up safe consumption rooms where illicit drugs can be used under supervision, in response to rising numbers of drug related deaths. Such facilities have been planned since 2018, but they need the approval of the UK Home Office. Scotland’s minister for drug policy, Angela Constance (above), said that work was being carried out to implement the idea. “This government is firmly in support of safe consumption rooms. They’re not the only solution but they do help to save lives,” she said.

Overseas news
Guinea reports case of Marburg virus disease
West Africa’s first ever case of Marburg virus disease, an epidemic prone disease with high case fatality rates, has been confirmed in Guinea, the World Health Organization reported. A patient died on 2 August, having attended a local health facility a day earlier with fever, headache, fatigue, abdominal pain, and gingival haemorrhage. As of 7 August all four of the patient’s identified high risk close contacts were asymptomatic. The world’s last outbreak of the disease occurred in 2017 in Uganda, when three people died. It was brought under control and declared over by that December, when the last known contact had every year

PLASMA
NHS Blood and Transplant has restarted collecting plasma from England’s donors—after it was banned in 1998 because of concerns over CJD—to make immunoglobulin to treat around 17 000 people with immune disorders every year

US trails other rich countries in healthcare
The US lags far behind 10 other high income countries in delivering healthcare, as measured by outcomes, access to care, preventive services, waiting times, and survey responses from thousands of doctors and patients. Norway, the Netherlands, and Australia took the top three places in the survey by the Commonwealth Fund—a private US foundation—and the UK was in fourth place. “In no other country does income inequality so profoundly limit access to care as it does [in the US],” said the fund’s president, David Blumenthal. “Other countries invest more in primary care and social services than we do.”

Cite this as: BMJ 2021;374:n2028

SIXTY SECONDS ON… DIGITAL CLINICAL SAFETY

UH-OH, SOUNDS LIKE A CANDIDATE FOR ANOTHER THREE LETTER ACRONYM
Digital clinical safety (DCS)—yes, another TLA—refers to the systems set up to prevent patients and staff from being harmed as a result of using digital technologies in healthcare.

SOUNDS FUTURISTIC. WHY NOW?
Nearly all UK adults (97%) who have received NHS care for any health condition since the covid pandemic began have used technology to interact with the health service, and 60% of those people have used it in a new way or more often than before. Digital prescriptions rose from 72% to over 90%, and repeat prescriptions ordered through the NHS app increased by 495% in one year.

OK, COMPUTER
This is definitely not just about computers. Digital technologies are being used more and more, and the DCS team assures the safety of all types of technology used in clinical care, not just computers and software. This could include apps that help monitor patients’ observations, a remote monitoring device such as a pulse oximeter, or an e-prescribing system.

SWITCH IT OFF AND ON AGAIN?
Though it can be very irritating when digital technology goes wrong, a bigger concern is the harm it can cause patients, which is why the DCS team exists. For example, imagine a remote monitoring app failing to alert patients to a deterioration in their condition, or a digital triaging system in the emergency department not filtering patients correctly because its operating system hasn’t been updated.

CAN I ASK THE DCS TEAM TO STOP MY HOSPITAL USING PAGERS?
Sadly not. The remit of the DCS team isn’t to expunge old technology but to check the safety of new technology.

HOW DO I CONTACT THE TEAM?
More information can be found at digital.nhs.uk/services/clinical-safety.

Clara Munro, The BMJ
Cite this as: BMJ 2021;374:n1999

Cite this as: BMJ 2021;374:n2028
China pressured WHO mission to dismiss lab leak theory, claims chief investigator

The conclusions of a World Health Organization mission to study the covid pandemic’s origins in Wuhan have been called into question by the scientist who led the mission, WHO announced on February that no further investigations were needed into the possibility that the virus had escaped from a laboratory. But Peter Ben Embarek claims the mission was put under pressure by Chinese

What is more concerning to me is the other lab. The one that is next to the market
Peter Ben Embarek

China pressured WHO mission to dismiss lab leak theory, claims chief investigator

Around one in nine hospital patients who had covid-19 during the first wave of the pandemic in the UK were infected after being admitted, researchers have reported.

Researchers from the universities of Lancaster, Liverpool, Edinburgh, Birmingham, and Imperial College London looked at the records of 82 000 patients with covid in UK hospitals who were enrolled in the International Severe Acute Respiratory and emerging Infections Consortium (ISARIC) Clinical Characterisation Protocol UK study and who became ill before 1 August 2020.

The results, published as correspondence in the Lancet, showed that 11.3% (95% confidence interval 11.1% to 11.6%) of patients by the middle of May 2020

One in nine inpatients with covid were infected in hospital

The researchers said there were notable differences between settings, with hospitals providing acute and general care reporting lower proportions of hospital acquired infections (9.7%) than residential community care hospitals (61.9%) and mental health hospitals (67.5%).

Chris Green, consultant physician in infectious diseases and coauthor of the letter, said it was likely that several factors contributed to infection rates. “These include the large numbers of patients admitted to hospitals with limited facilities for isolation, limited access to rapid and reliable diagnostic testing in the early stages of the outbreak, the challenges around access to and best use of PPE, our understanding of when patients are most infectious, some misclassification of cases due to presentation with atypical symptoms, and an underappreciation of the role of airborne transmission.”

The authors noted the figures were likely to be an underestimate, because they were not able to identify patients infected during admission but discharged before showing symptoms or patients infected during another healthcare visit before admission.

However, the researchers said rates of
Two vaccine doses are crucial for protection against delta, study finds

The two dose regimen of the Pfizer-BioNTech covid-19 vaccine is 88% effective against symptomatic disease caused by the delta variant, while the Oxford-AstraZeneca vaccine is 67% effective, research has found.

The study, funded by Public Health England, estimated the effectiveness of vaccination against symptomatic disease caused by the delta and alpha variants in people aged 16 or over between 5 April and 16 May. It found that, although two doses of either vaccine offered good protection against delta, a single dose of either was only around 30% (95% confidence interval 25.2% to 35.7%) effective.

In the UK the two doses have been given at an interval of up to 12 weeks to maximise effectiveness while getting a single dose to as many people as quickly as possible, with some people getting the vaccine at shorter intervals, depending on availability and infection rates.

In England an estimated 84,600 deaths and 23 million infections have been prevented as a result of the vaccination programme, up to 6 August.

A linked editorial Stephen Evans, professor of pharmacoepidemiology, and Nicholas Jewell, professor of biostatistics and epidemiology, from the London School of Hygiene and Tropical Medicine, wrote, “The key results are encouraging but emphasise the necessity of the second vaccine dose by showing a markedly lower effectiveness against the delta variant than against alpha among persons who received only one dose of either vaccine.”

They also pointed out that the two vaccine brands were used in different ways over time and were available in different healthcare settings and to different age groups at different times, making valid comparisons of effectiveness between the two difficult.

Cite this as: BMJ 2021;374:n2029

“CPAP cuts need for invasive procedures”

Continuous positive airway pressure reduced the need for invasive mechanical ventilation in adults admitted to hospital with acute respiratory failure caused by covid-19, a trial has found.

The Recovery Respiratory Support trial compared CPAP, high flow nasal oxygenation (HFNO), and conventional oxygen therapy among inpatients with covid who needed oxygen therapy, looking at the rates of tracheal intubation or mortality within 30 days with each treatment. A preprint of the findings has reported that neither CPAP nor HFNO, when compared with conventional oxygen therapy, reduced mortality.

**Outcomes**

In the study, funded by the UK National Institute for Health Research, 1272 patients were randomly allocated to one of the three delivery systems from April 2020 to May 2021.

Looking at a composite outcome of intubation or death within 30 days, the study reported the need for tracheal intubation or mortality was lower in the CPAP group (36.3%) than in the conventional oxygen therapy group (44.4%). However, the researchers said the fall seen in the CPAP group was “driven by a decrease in the incidence of tracheal intubation, with no statistically significant difference in rate of 30 day mortality.”

Fewer participants in the CPAP group required admission to critical care, and in those who required tracheal intubation the time to intubation was longer.

The chief investigator Danny McAuley, an intensive care medicine consultant at the Royal Victoria Hospital in Belfast, said, “HFNO uses a large amount of oxygen and can cause issues with limited oxygen therapy, and we’ve found that it doesn’t really add anything above conventional therapy.”

Cite this as: BMJ 2021;374:n1950

There are now opportunities to pre-empt hospital acquired infections and break chains of transmission Report authors

Elisabeth Mahase, The BMJ

Cite this as: BMJ 2021;374:n2017

in January, Ben Embarek said, “What is more concerning to me is the other lab. The one that is next to the market.” This Chinese CDC laboratory, he said, was handling coronaviruses “without potentially having the same level of expertise or safety.”

“Wrong translation”

An article on the TV2 website carried other comments by Ben Embarek that were not broadcast, apparently hinting at a Chinese cover-up. China’s sensitivity and secrecy, he is quoted as saying, “probably means there’s a human error behind such an event, and they’re not very happy to admit that.” Ben Embarek later told the Washington Post that these comments were a “wrong translation from a Danish article,” declining to comment further.

The WHO team’s scientists had to be approved by China and accompanied by an equal number of Chinese scientists, under conditions China set before allowing their entry. The Chinese scientists had to approve the report before its release.

But the swift dismissal of a lab leak drew widespread criticism, including from WHO’s director general, Tedros Adhanom Ghebreyesus, who has since called the finding “premature.”

Owen Dyer, Montreal

Cite this as: BMJ 2021;374:n2023

“We’re very happy to admit that.” Ben Embarek behind such an event, and they’re not probably means there’s a human error and secrecy, he is quoted as saying, “probably means there’s a human error behind such an event, and they’re not very happy to admit that.” Ben Embarek later told the Washington Post that these comments were a “wrong translation from a Danish article,” declining to comment further.

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Doctors call for ban on virginity testing and hymenoplasty

The Royal College of Obstetricians and Gynaecologists has urged the UK government to ban virginity testing and hymenoplasty.

In a policy statement the RCOG said there was no medical reason why these, or any other procedure under a different name that sought to reconstruct or repair the hymen, would need to be carried out. It said such procedures were harmful as they create and exacerbate social, cultural, and political beliefs that a woman’s value is based on whether or not she is a virgin before marriage.

The scale of the problem is not known in the UK because the procedures are carried out in private clinics and data are not available, said the college. It also expressed concern that the way private clinics were advertising these procedures to women was “further perpetuating myths around virginity, and in some cases being dishonest about what these procedures can achieve.”

The government has pledged to legislate to ban virginity testing but is yet to make this commitment on hymenoplasty. The RCOG is calling for a ban on both.

RCOG president Edward Morris said, “We recognise that women seeking these procedures are often in vulnerable and desperate situations. We would urge healthcare professionals who are approached about virginity testing or hymenoplasty to follow the appropriate safeguarding protocols to ensure women are able to connect with organisations that can offer support. This should include referring women to police or social services if there is a perceived risk of violence or coercion.”

The college is working with support organisations such as the Iranian and Kurdish Women’s Rights Organisation and Karma Nirvana, a specialist charity for victims of honour based abuse, to ensure support is in place for women who are being pressured into proving their virginity by undergoing such procedures.

Advertising is perpetuating myths around virginity and in some cases being dishonest about what the procedures can achieve

RCOG

Babies born in pandemic have lower cognitive ability

Children born during the pandemic scored markedly lower on standard measures of verbal, motor, and overall cognitive ability, US researchers have found.

In a longitudinal study of 672 children from Rhode Island that has been running since 2011, those born after the pandemic began showed results on the Mullen scales of early learning that corresponded to an average IQ score of 78.

The study, funded by the US National Institutes of Health, is awaiting peer review before publication in JAMA Pediatrics. But a preprint copy is available online.

The researchers largely ruled out a direct effect of the virus, as mothers or children with a history of testing positive for SARS-CoV-2 were excluded from the analysis. Instead, they say, reduced interaction with parents and less outdoor exercise were the likely culprits, along with effects that occurred during pregnancy.

Other research has hinted at behavioural effects in children born during the pandemic, including a recent study from Italy.

Children born in 2019 did not experience a decline in development scores during the pandemic. However, scores among children born during the pandemic began to decline in 2020 in an early learning composite that measured fine and gross motor control, visual reception, and expressive and receptive language. But it was in 2021 that the developmental deficit became significant (P<0.001). The effect was larger in boys than in girls.

The strongest protective factor was higher maternal education, and mothers in the study population had more schooling than the US average, indicating that results in areas with

England’s medical schools to get £10m to expand student numbers

Growing demand for medical school places is to be met with extra funding of as much as £10m, as school A level results have reached a record high.

The government announced on 5 August that it would give medical and dental schools in England extra funding to expand courses for the coming academic year, to fulfil more guarantees of foundation training and that it would like more solid guarantees of foundation training places after graduation.

The number of available university places to study medicine is regulated by the different UK governments and controlled through intake targets, leading to stiff competition for places. Applications to study medicine rose by 21% last year, from 23 720 in 2020 to 28 690 in 2021, said a briefing by the Medical Schools Council, the representative body for UK medical schools, for only 9500 available places.

In response to this demand the government said it was adjusting the cap on medical and dentistry places, although the exact number of additional places

Gareth Iacobucci, The BMJ

Cite this as: BMJ 2021;374:n2037

216
We are seeing, anecdotally, a significant depression in the number of words spoken to kids  

Sean Deoni

less educated populations could be “even more depressing,” said the study’s lead author, the paediatrician Sean Deoni of Brown University.

Although the study did not directly measure time spent interacting between family members, said Deoni, “we do have some preliminary data that we’re working on in a separate study using miniature recorders which the infants wear on their chest which measure the interaction between the caregiver and the child.”

He said, “What we are seeing, anecdotally, is a significant depression in the number of words spoken to kids and, as you can imagine, a massive increase in TV exposure, and a decline in meaningful conversations. Time spent engaged with a caregiver is way down.”

Owen Dyer, Montreal
Cite this as: BMJ 2021;374:n2031

THOSE BORN after the pandemic began showed results ... of early learning that corresponded to an average IQ score of 78

available will not be known until mid-September.

Brokerage programme

Gavin Williamson, England’s education secretary, said, “Medicine and dentistry have always been popular courses, and we have seen significant demand for places this year. We want to match student enthusiasm and ensure as many as possible can train this year to be the doctors and healthcare professionals of the future.”

The Medical Schools Council announced on 10 August that schools had jointly agreed to support a brokerage programme so that applicants who met the conditions of their offers at oversubscribed medical schools would be invited to move to different medical schools and receive a payment of £10 000 for the inconvenience.

Mary Anne Burrow, co-chair of the BMA’s Medical Academic Staff Committee, welcomed the extra funding but added, “This increase in student places must not come at the expense of extra funding for the existing workforce or reductions in funding in future years. The government must make clear that there will be sufficient clinical placements for all those who succeed at medical school.”

Andrew Goddard, president of the Royal College of Physicians, told The BMJ that although it was welcome the boost in places was insufficient. “We now need to see the detail, as more medical school places should mean more investment down the line to make sure that students are sufficiently supported through training and can progress to a consultant career.”

Adrian O’Dowd, London
Cite this as: BMJ 2021;374:n1998

Call for cash boost as NHS care list hits 5.5m patients

Healthcare leaders have called for more funding for the NHS as data show that 5.45 million patients in England are now waiting for routine care.

Data published by NHS England and NHS Improvement on 12 August show that the number of patients waiting for consultant led elective care in June had risen to 5 454 314. Of those, 304 803 patients had been waiting more than 52 weeks.

Deborah Ward, senior analyst at the King’s Fund, warned that waiting lists had the potential to grow further, as people who weren’t referred during the covid-19 pandemic seek treatment. She added that, even before the pandemic, waiting lists had risen after a decade of stalled funding and a growing workforce crisis.

“The NHS has improved patient care by successfully tackling mammoth waiting lists before, but there are no quick fixes,” Ward said. “The NHS will need time, resources, and a fully funded workforce strategy to recruit and retain more staff.”

Chris Hopson, chief executive of NHS Providers, said that trust leaders were doing all they could to get through care backlogs as quickly as possible, prioritising those patients who needed to be seen most urgently.

“But they need to be resourced properly so they can meet the myriad challenges ahead,” Hopson said. “That’s why it’s so important the NHS gets the immediate funding it needs for the second half of the financial year and in the upcoming comprehensive spending review.”

Layla McCay, director of policy at the NHS Confederation, pointed out that it was not only elective care that was under pressure, with 2.16 million emergency department attendances in July, the highest since winter 2019 and amounting to some 70 000 attendances a day. “The government must take steps now to make sure the NHS can cope, as autumn and winter are expected to be even tougher than usual this year,” she said.

Katherine Henderson, president of the Royal College of Emergency Medicine, echoed these concerns. “The NHS has been running hot for months now, and these figures show we are nearly at boiling point,” she said. “The problems that were with us before the pandemic have not gone away. Not only do they remain but are now much worse, as these figures make crystal clear.”

The shadow health secretary, Jon Ashworth, said bringing down waiting times must be the priority. “Ministers must deliver a credible long term rescue plan for our NHS and social care sector, guaranteeing the staffing and modern technology that are so desperately needed to bring down waiting times, avoid a winter crisis, and provide the exceptional care patients deserve,” he said.

Abi Rimmer, The BMJ
Cite this as: BMJ 2021;374:n2014

Ministers must deliver a credible long term rescue plan for our NHS

Jon Ashworth
Haitian lives were again devastated last Saturday by a second major earthquake in just over a decade. More than 1000 people died and at least 6000 were wounded when the 7.2 magnitude quake hit the region around the southwestern city of Les Cayes, about 100 miles west of the capital, Port-au-Prince. Officials have estimated that around 7000 homes were destroyed, along with many hospitals and healthcare clinics.

Inobert Pierre, a paediatrician with the non-profit Health Equity International, described to Associated Press the conditions in the area’s overwhelmed hospitals. “Many of the patients have open wounds, and they have been exposed to not so clean elements. We anticipate a lot of infections,” he said.

The impoverished Caribbean country has not yet fully recovered from the 2010 earthquake, which killed an estimated 200 000 people. Unicef’s executive director, Henrietta Fore, said on Sunday that the nation’s humanitarian needs were acute, with many Haitians urgently needing healthcare, clean water, and shelter. “Little more than a decade on, Haiti is reeling once again,” said Fore. “And this disaster coincides with political instability, rising gang violence, alarmingly high rates of malnutrition among children, and the covid pandemic—for which Haiti has received just 500 000 vaccine doses, despite requiring far more.”

Alison Shepherd, London

Cite this as: BMJ 2021;374:n2035

1. The remains of a street in Les Cayes
2. Residents of Les Cayes recover in a makeshift shelter
3. A young boy is treated at Les Cayes General Hospital
Violence against women and girls

A preventable pandemic that demands urgent action across government

Violence against women and girls regularly makes headlines, gaining prominence with the murder of Sarah Everard four months ago. The Home Office responded with a new strategy to tackle violence against women and girls that seeks to improve the criminal justice system’s response to rape, strengthening law enforcement and improving support and prevention. Is it sufficient to turn the tide?

Violence against women and girls emerged as a shadow pandemic during covid-19, raising awareness that women and girls experience high levels of sexual violence from strangers but also face violence where they should feel safe—in their own homes. The World Health Organization estimates that one in three women worldwide experiences physical or sexual intimate partner or non-partner violence. The UK is no exception: around 1.6 million women reported domestic violence in the year to March 2020, and 22% of women reported having experienced indecent exposure or unwanted sexual touching in the past year. Once every three days a man in the UK murders a woman. Sexual harassment is normalised in public, private, and educational settings.

Prevention of violence against women and girls is crucial given the well documented health consequences, including severe depression, suicidality, sexually transmitted infections, alcohol misuse, injuries, and pregnancy complications. Violence against women is a societal problem: the economy is affected through working time lost to trauma and injuries, and resources are drained from multiple services, including the criminal justice system, health services, the civil legal sector, social welfare, and specialised services, the costs of which are borne publicly or collectively.

Respect

Yet we know that violence against women and girls is preventable. WHO’s RESPECT women framework summarises what works: challenging discriminatory gender norms and attitudes that condone violence against women, reforming discriminatory family laws, supporting women’s access to formal paid employment and secondary education, reducing exposure to violence in childhood, and tackling substance misuse.

Critically, these interventions are woman centred and multisectoral, bringing together law enforcement, social services, and the health and educational systems. Collaboration between law enforcement and social services helps to ensure that, for example, women with police protective orders are not forced to adhere to unsupervised child visitation rights that expose them to their abuser. Close collaborations between medical and legal services are needed to collect robust forensic evidence on injuries and other consequences of violence—particularly trauma and post-traumatic stress disorder—as these are known to affect a victim’s ability to testify.

Ensuring a multisectoral and adequate response to violence against women and girls requires long term investment by governments. A review of strategies implemented by governments in WHO’s European region showed that those with strong baseline support systems, especially budgetary commitments, were better prepared to meet the increased demand for violence response services during the covid-19 pandemic.

Underfunding and mismanagement in the justice system have caused severe delays in the prosecution of rape cases in the UK. This signals to women and girls that their experiences and wellbeing are a low priority and that violence against women and girls is not considered serious enough to warrant timely prosecution.

In the long run this erodes trust in the criminal justice system, fuels the belief that violence against women and girls is acceptable, and undermines prevention efforts. Similarly, the UK’s planned strategy to tackle violence against women fails to consider violence against women holistically, focusing primarily on expanding law enforcement to respond to violent incidents instead of tackling the root causes of violence against women and girls through a well funded coordinated approach that is woman centred.

Intimate partner violence and non-partner sexual violence are complex issues with no quick solutions. However, violence against women and girls is not inevitable. To prevent it, we urgently need dedicated public funding and investment in multisectoral action involving the government, police, criminal justice system, and public, health, and educational sectors.
Companies and rich nations are creating a deadly covid-19 “protection racket”

In the first three months of 2021, Pfizer’s covid-19 vaccine brought in $3.5bn (£2.5bn) in revenue and hundreds of millions in profit. Other companies are also making exceptional profits from covid. Moderna, which received public funding to develop its vaccine, will earn several billions of dollars in sales. Even AstraZeneca, with its acclaimed “non-profit” model, will receive billions in revenue and is free to raise the price once it considers the pandemic to be over.5

But the rich world is refusing to share vaccines with poorer countries speedily or equitably. The 50 least wealthy nations, home to 20% of the world’s population, have received just 2% of all vaccine doses.6 The rich world should be ashamed.

The World Health Organization wants rich nations to halt booster vaccination and instead send doses to less wealthy nations7—yet Pfizer is expecting rich nations to ignore WHO and recommend boosters, helping to increase its expected revenues to $3.5bn.8

Pandemic profiteering is, in our view, a human rights violation that demands investigation and scrutiny. The Universal Declaration of Human Rights states that everyone has the right “to share in scientific advancement and its benefits.”9

Yet vaccine preventable deaths are occurring across Africa, Asia, and Latin America at an unprecedented speed and scale. Let us be clear what is causing these deaths: a free market, profit driven enterprise based on patent and intellectual property protection, combined with a lack of political will. Contrary to claims, it is possible to make enough vaccines for the world.10

Vaccine apartheid

By September 2020, around 30 rich nations—those able to pay high vaccine prices—had cleared the world’s shelves of doses through advanced purchase orders,10 leading to vaccine apartheid.11 Canada purchased enough doses to vaccinate its citizens five times over.12 The UK procured enough doses for four times its population. By the end of 2021, rich nations will be sitting on one billion unused doses.13

To try to prevent such hoarding, a global vaccine sharing mechanism called Covax was launched last year. Covax aimed to buy enough doses to vaccinate at least 20% of people in 92 poorer countries by the end of 2021.14 It is way off target.15 Rich nations pushed Covax to the back of the queue, and it has struggled with procurement, delivering just 163 million doses, far short of the billions of doses needed.16 The G7 agreed to donate less than 8% of the required doses to Covax.17

The governments of India and South Africa are leading a proposal to temporarily waive intellectual property protection on covid-19 technologies, backed by over 100 countries.18 But vaccine manufacturers and many rich countries are working tirelessly to block waiver discussions at the World Trade Organization, which itself is acting sluggishly.19

Instead of a freely available public good, vaccines remain a commodity owned by companies and sold to the rich. Instead of hoarding one billion “excess” doses this year, rich nations could give them to Covax.20 While such “charitable donations” are a first step, they are not enough. The current “trickle down” colonial charity model has failed.21

The only sustainable way forward is to globalise manufacturing so that disadvantaged countries no longer rely entirely on charity. Poorer countries require relaxation of intellectual property rights, technology transfer, and support to rapidly establish regional vaccine manufacturing hubs.22 Africa, Asia, and Latin America are perfectly capable of producing vaccines, and to claim otherwise is misleading.23

Power and the ability to pay

Covid-19 global vaccine allocation is based on power, first mover advantage, and the ability to pay. This moral scandal, enabled by corporate and political permission of mass death, is tantamount to a crime against humanity. Yet we too are complicit by our silence. Why are workers and shareholders at vaccine companies not speaking out? Where are the academics clamouring to make the “fruits of the scientific enterprise” available to all? Where are the lawyers demanding global justice and corporate accountability? Which leaders of rich nations are pressuring vaccine companies to make their people safe by making the world safe? Where is the grassroots mobilisation of scientists and health workers to fight for fair access to vaccines?

Global vaccine inequity is toppling all our successes in rapid vaccine development and is needlessly prolonging the pandemic. Under the cover of serving humanity, and with a blind eye turned towards the innumerable deaths in disadvantaged nations, corporations aided by their political allies are once more doing what they do best: making a killing.24

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Undermined and undervalued: how the pandemic exacerbated moral injury and burnout

Government and employers must assess risk and ensure sufficient personnel, resources, and support to protect NHS staff, an informal inquiry has heard. Jo Best reports

"I can’t describe to you how desperate it was. Every single day there was an NHS worker in tears in the changing room because we were seeing colleagues dying," said Michelle Dawson, an NHS consultant anaesthetist in Derbyshire, recalling the beginning of the pandemic. She was giving evidence to an ongoing informal inquiry into covid-19 in the UK. “We saw them dying and we were terrified we would be next. But you just have to keep going.”

Chidi Ejimofo, a London based emergency medicine consultant, described exhaustion among staff in his department. Early in the pandemic they had to create their own guidance for managing covid-19 and buy their own personal protective equipment (PPE). There were insufficient staff because they were falling sick, he said. And, of course, there was the underlying fear. By the second wave, after nine months, staff were exhausted, he told the inquiry. “Junior doctors and nurses had seen things that they shouldn’t have been expected to take on at that stage in their training.”

Stories of stress and mental health problems because of work are nothing new for NHS staff. But the pandemic has led to increased recognition of “burnout”—the emotional, physical, and mental exhaustion caused by excessive and prolonged stress—and “moral injury”—when professionals are forced to act against their conscience.

The People’s Inquiry

Despite broad and longstanding support for starting a formal review quickly, in May the prime minister, Boris Johnson, said that a public inquiry would begin in spring 2022. But delay could mean that opportunities to learn vital lessons are missed, leading to more deaths and harm to the public and key workers, critics say.

For this reason, the campaigning group Keep Our NHS Public convened the People’s Covid Inquiry, chaired by the human rights lawyer Michael Mansfield QC. Over nine sessions it gathered evidence from some 40 expert witnesses, key workers, patients, and bereaved people and last month published interim recommendations.

Testimony described rises in reported burnout and reduced feelings of wellbeing and resilience. The panel heard repeatedly how staff felt undermined and undervalued when, having put their lives at risk to work through the pandemic, the government offered them a 1% pay rise. Moral injury wasn’t intended to be considered by the inquiry but witnesses mentioned it repeatedly.

The inquiry panel had “all been shaken by how bad it is,” said Mansfield. “It’s moral injury caused by the fact that they’ve been put into a situation not of their choosing.”

Losing the drive to keep working

A BMA survey with 6126 respondents in April 2020 found that more than 40% of doctors were experiencing depression, anxiety, stress, or burnout that had been worsened by the pandemic; 60% reported more fatigue or exhaustion than normal.

“For people to leave home every day to do hard and dangerous work, they need to know that it’s worth it, that it means something,” Rachel Sumner, senior lecturer in psychology at the University of Gloucestershire, told the inquiry. “We have witnessed that meaning in life is going down,” she said, with healthcare workers feeling hopeless and losing the drive to keep working.

Sumner is researching wellbeing, resilience, and burnout among key workers in the UK and Ireland. Levels of exhaustion, cynicism, and feelings of inadequacy reported by frontline staff had all risen significantly six months into the pandemic, she told The BMJ, and by 12 months levels remained high.

“This was all being driven by the perceived timeliness of the government’s actions,” Sumner told the inquiry. Metrics in Ireland, where the government’s response was seen as more timely, were better than in the UK, she said. UK workers tended to find government messaging unclear; thought that schools, universities, and pubs were open when they shouldn’t have been; and believed rule breaking wasn’t dealt with consistently.

Stephen Reicher, professor of social psychology at the University of St Andrews and member of the Independent Scientific Pandemic Insights Group on Behaviours, which advises the
I was forced to work in unsafe conditions. I ended up having a mental breakdown and becoming suicidal

Kirsty Brewerton

Independent government advisers the Scientific Advisory Group for Emergencies (Sage) on behavioural science, told the inquiry that burnout is not simply from overwork; feeling unable to do your job properly, however hard you work, also contributes.

Healthcare workers feel undermined, including by the policies that led to covid patient numbers spiking, he said. Other witnesses criticised the government’s subsidised Eat Out to Help Out scheme to encourage people back into restaurants last summer. Reicher also mentioned having to choose between allocating beds to patients with covid or other urgent needs, such as cancer care, and the government’s 1% pay offer. All of this is “deeply demoralising, and leads to profound burnout,” he said.

Dangerous and difficult environments

Eight out of 10 doctors said they have experienced moral injury during the pandemic, in a UK survey run by the BMA from 18 March to 12 April 2021, which received 1933 responses.

The pandemic may have contributed to moral injury in several ways, the inquiry heard. Doctors often found themselves in dangerous and difficult working environments, with unprecedented demands and huge responsibility without the control needed to achieve expected standards of care.

Instead, levels of care decreased as routine operations were suspended and one-to-one care for patients with covid was abandoned, for example. Doctors had to work outside their specialties and lack of PPE meant staff risked infecting patients or turning them away.

Dawson described to the inquiry a hospital at the height of the first wave that had run out of PPE. “When people have died they need to be moved. Porters, who are usually on zero hours contracts, were having to move infected bodies with no body bag, no mask, and no gown,” she said. In the first wave, doctors were told that PPE was being redirected to intensive care, and other departments could use it only for staff coming within two metres of patients, Dawson added.

Rachel Clarke, a consultant in palliative care medicine based in Oxfordshire, said that faced with dwindling stocks of PPE, her hospice faced having to redirect dying patients to emergency departments.

“I looked at my medical director and actually started to cry, because we couldn’t see any way of protecting our profoundly vulnerable patients, people who deserved to be cared for with enormous dignity,” Clarke told the inquiry.

Solutions to systemic problems

Burnout and moral injury did not begin with the pandemic and will not end with it. “People who have worked in the NHS for a long time have found that they cannot do the job that they wanted to because of austerity, short staffing, and all the rest of it. On top of chronic moral injury, we’ve now got acute moral injury,” said panellist Jacky Davis, a consultant radiologist in London.

Clinical sister Kirsty Brewerton, based in the West Midlands, described to the inquiry working in an emergency department before the pandemic, with too many patients, not enough staff, and feeling nothing was being done to help. “I was forced to work in unsafe conditions, and I ended up having a mental breakdown and becoming suicidal. It’s the moral injury of feeling unable to look after people properly.

“If you care about your job, then you want to do it well. You go into this job because you care about people and you want to make them better. When you’re forced into a situation where you’re unable to do that, or to do your job to the level that you trained at, that is really hard mentally.”

“There is a duty of care for the trust to recognise we are at risk,” she said. “For it not to be a priority is worrying.” Mental health support varies across NHS trusts, with no standard risk assessment for workers. Staff aren’t trained to maintain their own mental health, Brewerton said. “If we want to retain staff, it’s something that should be tackled seriously by all trusts.”

Ejimofor called for robust ways for staff to report when they feel that they are constrained from being able to carry out their duties. “That was lacking during this pandemic,” he said.

Repair the context

All this is likely to affect staff retention. The inquiry heard that departures will magnify pressure on the NHS workforce, making it harder to provide the care that patients expect and healthcare workers value, exacerbating future risks of moral injury and burnout.

The inquiry is expected to publish its final report and recommendations in the autumn.

Tony O’Sullivan, a retired paediatrician and co-chair of Keep Our NHS Public, told The BMJ, that the onus must be on government to ensure that healthcare and social care staff have the psychological support they need. “They also need to repair the context in which people are being overworked and demoralised,” he said. “It’s a political answer: the government has to recognise how its public workforce has suffered and say, ‘We will put our faith back in you by funding you properly, by training enough staff, by paying a reasonable wage, and by giving you the equipment, the buildings, and the wards that we’ve taken away during the past 10 years.’”

Jo Best, freelance journalist, London

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A lingering question is to what extent the vaccines may be losing effectiveness at preventing onward transmission from people who become infected. After all, each of the new variants is characterised by increased transmissibility compared with the original (wild type) SARS-CoV-2. Akiko Iwasaki of Yale University (right) says we won’t know unless we can get more observational studies following household contacts. One yet to be peer reviewed study looked at a single outdoor wedding near Houston, Texas, in April where all 92 guests were required to be fully vaccinated. A couple who had travelled from India later tested positive for delta, with one dying a month later. Of the people they interacted with at the wedding, four became ill with delta. One required monoclonal antibody treatment, but all four survived.

Warning signs

Data up to 4 August from Imperial College London’s React study found that, compared with unvaccinated people, those people who said they had received two vaccine doses were half as likely to test positive for covid-19, adjusting for other factors such as age and whether or not they had symptoms. The researchers estimated a 50-60% lower risk of infection from the delta variant if a person was double vaccinated compared with unvaccinated people. The picture emerging from various countries does, however, suggest that vaccinated people are more likely to experience symptoms after catching the delta variant compared with earlier forms of the virus.

Data published by the Israeli government suggest that the Pfizer BioNTech jab’s efficacy against symptomatic infection fell...
Neutralising antibodies

It’s not yet clear how the body’s immune system fights SARS-CoV-2. Without knowing for sure what the correlates of protection are, it’s hard to say why a vaccine may be less effective against variants. Evidence is accumulating, however, that the ability of antibodies to neutralise the delta variant is reduced compared with, say, the alpha variant.

A study published in *Nature* found that antibodies in blood samples (sera) from convalescent patients up to 12 months post-infection were four times less effective at neutralising the delta variant than the alpha variant. Sera from people who had only a single dose of the Pfizer BioNTech or Oxford AstraZeneca vaccines “barely” inhibited delta, wrote the authors.

They did, however, see a neutralising response in sera from almost all people who had received two doses of a vaccine. Another study on neutralising antibodies, published in the *Lancet*, found that, following two doses of the AstraZeneca vaccine, the number of people who had quantifiable antibodies against delta was significantly lower, at 62% (39 of 63), than against the original wild type SARS-CoV-2 (100% of participants).

That may sound worrying, but Akiko Iwasaki, professor of immunobiology and molecular, cellular, and developmental biology at Yale University, says there is reason to be hopeful that people who have had two vaccine doses can still fend off severe disease when infected by delta. This is likely to be in part because of other aspects of the immune system, such as T cells that stimulate B cells to produce antibodies or killer T cells that destroy infected cells in the body.

She also points out that a reduction in neutralising antibodies does not necessarily mean that antibodies will fail to have an impact. “I assume that the reason we can still prevent severe disease from the delta variant is that we are generating enough antibody response against the spike protein,” she says.

Laboratory based analysis of antibody and T cell responses to the original SARS-CoV-2 virus and multiple variants coauthored by Iwasaki and yet to be peer reviewed found that, against delta, vaccination still prompted neutralising antibodies. There were, however, more antibodies in people who had caught covid-19 before vaccination.

The bottom line is that delta—a variant with distinct mutations that make it much more transmissible—poses a challenge to vaccines currently used. But in most people the vaccine induced levels of neutralising antibodies are still large enough to protect against serious illness and death.

So, while it’s sobering to see cases occurring in fully vaccinated people, their protection is holding up well, as judged by numbers of hospital admissions and fatalities relative to what might have been. As Iwasaki puts it: the message should still be to get vaccinated as soon as possible.

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<th>Manufacturers confident</th>
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<td>“We haven’t seen any evidence that the circulating variants result in a loss of protection provided by the Pfizer BioNTech covid-19 vaccine (BNT162b2) in our laboratory studies,” a spokeswoman for Pfizer told The BMJ. AstraZeneca said in a statement: “Real world data from Public Health Scotland published in the <em>Lancet</em>, reaffirmed the AstraZeneca covid-19 vaccine was effective in reducing the risk of SARS-CoV-2 infection and hospital admissions because of the delta variant but at a slightly lower level compared with the alpha variant.” Moderna has said tests show that its vaccine continued to produce neutralising activity against multiple variants of concern, including delta, while a Janssen spokesperson told The BMJ, “Against the emerging variants of concern, neutralising antibodies were higher against the delta variant than what was observed for the beta variant in South Africa.” Despite this universal confidence, however, Pfizer, for one, is at work on an updated version of its vaccine, targeting the delta variant specifically. The company hopes this will enter clinical studies in August.</td>
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Modernera all reduce the risk of death by more than 85%, regardless of variant.

Figures from Public Health Scotland published in the *Lancet* also show a drop in protection against symptomatic illness, from 94% to 64% after the delta variant began spreading in the country.

From 94% to 64% after the delta variant began spreading in the country.

Despite these drops in efficacy—vaccines in use from very mild to severe illness.

Symptomatic infection can take many forms, for example. And protocols determining when people become eligible for a covid-19 test, for example. And symptomatic infection can take many forms, from very mild to severe illness.

But Riley points out that the PHE data to date are consistent with estimates that suggest— despite these drops in efficacy—vaccines in use in the UK (Pfizer BioNTech, AstraZeneca, and Moderna) all reduce the risk of death by more than 85%, regardless of variant.
How many variants are there, and what do we know about them?

Eight notable variants have been found since September 2020. Elisabeth Mahase reports

Alpha
Considered a WHO variant of concern, alpha was first identified in Kent in September 2020 and drove the UK’s second wave. It was first thought to be around 70% more transmissible than the original (wild-type) SARS-CoV-2 coronavirus, but data now suggest 30-40%. Research has shown vaccine efficacy (two doses) against alpha to be 74.5% with Oxford-AstraZeneca, 93.7% with Pfizer-BioNTech, 85.6% with Novavax, and 100% with Moderna. A study of the Sputnik V vaccine saw some reduced neutralising activity against alpha, and Thailand’s Public Health Ministry reported that two doses of Sinovac were 71-91% effective.

Beta
First documented in South Africa in May 2020, beta is also a WHO variant of concern. The US CDC has linked beta with 50% higher transmission, but the big worry is emerging evidence of its ability to evade some existing vaccines. Early studies show that Pfizer has a slightly lower (72-75%) effectiveness against beta than against wild-type, but both Pfizer and Moderna say their vaccines are still 95% effective against severe disease and death. Novavax (60%) and Johnson and Johnson (57%) fare slightly worse. And, while early studies of Oxford-AstraZeneca seemed to show low efficacy against beta, real world data published on 23 July showed 82% effectiveness in preventing severe disease and death from covid after a single dose. Sputnik V’s maker says it is “highly effective” against beta, but at least one study noted reduced neutralising activity. Data on Sinovac’s CoronaVac are lacking, but at least one study noted reduced neutralising antibody effects from CoronaVac, although reports from Hong Kong suggested 70% lower protection than against wild-type.

Gamma
First identified in Brazil in November 2020 and another variant of concern, gamma remains the dominant variant in South America and is 1.7-2.4 times more transmissible than wild-type, research suggests. Few studies have been conducted, but reports of a gamma outbreak at a goldmine in French Guiana noted a “strikingly high attack rate” among people fully vaccinated with Pfizer: 60% of fully vaccinated people became infected, compared with 75% of unvaccinated miners with no history of infection. Sputnik V’s maker says it is “highly effective” against variants including gamma, but a study of antibody responses published in July found reduced neutralising activity.

Delta
A variant of concern now dominant in Europe and the US, delta continues to drive cases in much of Asia including India, where it was first identified in October 2020. Delta is the most transmissible form of SARS-CoV-2 detected so far: as much as 60% more so than alpha, one study estimated. Researchers called it an “improved” version of the alpha variant thanks to a mutation that makes it more infective in the airways. This means more virus in the infected person such that they may expel more of it into the air, and one preprint found viral loads as much as 1260 times higher than in people infected with wild-type SARS-CoV-2. And if delta is better at infecting airways people may become infected after lower exposure.

Eta
First identified in Peru in December 2020, Eta is a variant of interest reported in 55 countries. The CDC says it may reduce the neutralisation ability of some monoclonal antibody treatments and convalescent plasma. A WHO “variant of interest,” its second tier level of alert.

Iota
Little is also known about iota, first identified in New York in November 2020. It has been reported in 53 countries, and the CDC says it has lower susceptibility to the combination bamlanivimab-etesevimab monoclonal antibody treatment. A WHO variant of interest.

Kappa
First documented in India in October 2020, kappa is a variant of interest reported in 55 countries. The CDC says it may reduce the neutralisation potential of some monoclonal antibody treatments.

Lambda
First identified in Peru in December 2020, lambda became the dominant variant there within three months, accounting for 80% of cases. The swiftness and presence of mutations that could affect transmissibility and antibodies’ effectiveness make it a variant of interest. Detected in 41 countries, it has not yet outcompeted the more dominant variants.

No peer reviewed studies have been conducted, but early preprints show some reduction in neutralising antibody effects from CoronaVac, as well as Pfizer and Moderna, although researchers are confident that the latter two would remain protective.