comment

"NHS managers represent an easy target for soundbites" **DAVID OLIVER**
"How will our current mode of consulting affect GP training?" **HELEN SALISBURY**
PLUS Making policy based on flawed evidence; health workers don't want a cenotaph

CRITICAL THINKING Matt Morgan

Standing in a parent's shoes can impede decisions

The family room hangs in silence. I've explained the science, the medicine, and the human costs. It was a near impossible decision to make, with no right or wrong answer. An operation will probably kill her. Without an operation, she's likely to die. Then came the familiar question relatives often ask: "If it were your daughter, what would you do?"

This kind of question can quickly cut through the scientific shell of medicine's most difficult decisions. I was instantly transformed from an intensive care consultant into a dad. If I were to take on this role—if I were in fact this patient's father and not her doctor—it would make the decision easy for me: choose the operation, choose the possibility of life, at all costs.

In intensive care we have to continually think about how our patients will be affected by the treatment and care we provide, to consider what their life will be like in the aftermath. Yet stepping into the shoes of a relative, rather than the patient, changes the fit of a decision in important ways. This kind of bias could cloud my interpretation of the data and may result in a loss of impartiality. There's a reason why someone's mum or dad cannot, or should not, be their doctor. Sometimes difficult decisions need measured objectivity—but discussed through a prism of humanity.

I've heard the same question asked in other contexts. On one occasion it was asked not by a relative but by a researcher at a meeting, who was presenting the results of a trial on the use of vitamin C in sepsis. Despite the trial showing no outcome benefits the researcher argued that this intervention should nevertheless be used, asking the audience, "If it were your daughter, would you want her to have the treatment?"

Many people raised their hands in affirmation, although the objective data were clearly set out on a slide in the background. But, when phrased like that, who could blame them? The blame should surely lie in the question's construction. "Will you still give patients the treatment?" would have been better, and I suspect that it might have yielded a very different answer.

And so, I answer: "If it were my daughter I would think about what she would say, what she would want. I would imagine her sitting in the room with us right now, listening to this tough conversation. What would she say?"

I am rational as a doctor but irrational as a parent. Shared decision making remains essential. We need to share the discussion and the scientific data, but we must also maintain some impartiality when interpreting them.

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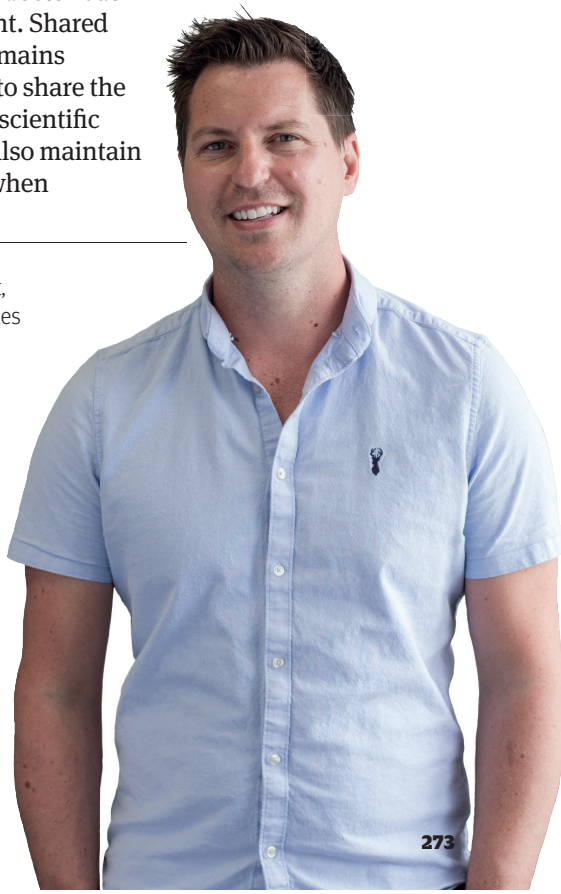
There's a reason why someone's mum or dad cannot, or should not, be their doctor



PERSONAL VIEW Harry Rutter, Miranda Wolpert, Trisha Greenhalgh

Managing uncertainty in the covid-19 era

Some simple rules will help decision making during the pandemic

The pandemic is maturing, but uncertainties continue to multiply for individuals and for policy makers. Should I return to work? Should I visit relatives? Which businesses should reopen? What about schools and universities? This article will not answer those questions. It is about uncertainty and how we handle it at personal and policy levels when urgent action is essential.

Science is sometimes depicted as the methodical search for truth and good policy making as the translation into action of those evidence based truths. Before the pandemic such assumptions sometimes (though not always) were held. But covid-19 has brought the complexity of science and policy into sharp focus. Some research findings can probably be given the status of facts, but overall the evidence base on effectiveness of interventions (preventive and therapeutic) remains patchy.

As each country's experience shifts from an acute national disaster to a chronic policy crisis, we all—clinicians, scientists, policy makers, and citizens—need to move on from imagining that the uncertainties can be resolved. They may never be.

This is because covid-19 is a complex problem in a complex system made up of multiple interacting components. Such systems are open (their fluid boundaries are hard to define), dynamically evolving (elements affect, positively or negatively, other elements), unpredictable (a fixed input doesn't have a fixed output), and self-organising (the system responds adaptively to interventions). Complex systems can be properly understood only in their entirety; "solving" one part does not produce a solution that works across the system for all time. Uncertainty, tension, and paradox are inherent and must be accommodated rather than resolved.

Elusive uncontested facts

In circumstances like this, uncontested facts—things that are ascertainable, reproducible, transferable, and predictable—tend to be elusive. Most decisions must be based on information that is flawed (imperfectly measured, with missing data), uncertain (contested, perhaps with low sensitivity or specificity), proximate (relating to something one stage removed from the phenomenon of interest), or sparse (available only for some aspects of the problem).

Data that are trustworthy, certain, definitive, and plentiful can be presented as facts, and evidence based decisions can follow. But the stage of this pandemic requires us to work with the kinds of imperfect data described above, so different approaches are needed.

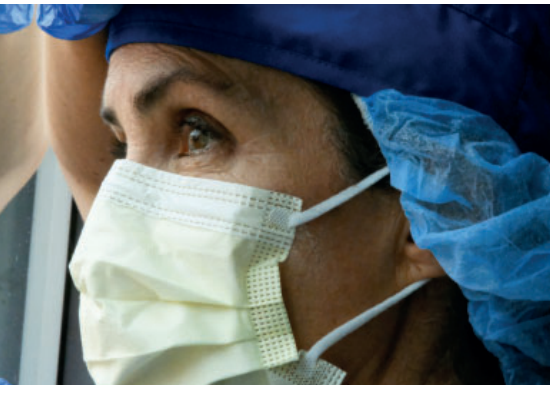
All of us making use of such data should be aware of our own confirmatory biases, avoiding groupthink and applying the same standards of scrutiny to findings that appear to support our prior beliefs as to those that challenge them. In such circumstances we all may need to make decisions on the basis of "balance of probabilities" rather than "evidence beyond reasonable doubt."

Instead of seeking (or feigning) certainty we should be open to uncertainty and transparent in the ways in which we acknowledge the limitations of the imperfect data we have to use. Teams should be encouraged to admit ignorance, explore paradoxes, and reflect collectively. This will improve the quality of decision making by supporting constructive scrutiny and make us more open to revising decisions as new data and evidence emerge.

Even when an evidence base seems settled, different people will reach different conclusions with the same evidence. When the evidence base is at best inchoate, divergences will be greater. Unacknowledged or suppressed conflicts over knowledge can be destructive. But, if surfaced and debated, competing interpretations can

BMJ OPINION Judith Dawson

Healthcare workers during covid: dulce et decorum est



Working in healthcare has long been associated with the risk of exposure to disease and the denial of self.

Starting as a medical house officer in 1989, I had an occupational health medical exam. The consultant looked at me seriously and said, "You will always need to be vigilant for signs of tuberculosis as this hospital serves a high incidence population." Later I was suspended from doing invasive procedures for four weeks as I showed no response to hepatitis B vaccination and was suspected of being a carrier, perhaps even infected, while working on the paediatric liver unit.

A working week of more than 100 hours has led to junior doctors being trained to deny their physical needs and ignore the signs of illness. More recently we have experienced

Mythologising health workers fails to acknowledge there was an alternative

the hypocrisy of an approach that advises the public to lose weight, exercise, and reduce stress, while driving the medical workforce to work longer hours in unhealthy environments with poor nutrition and rest facilities. How is it possible to devise on-call rotas that deny time off for funerals or weddings?

The recent incoherent and dishonest approach to the provision of personal protective equipment is the culmination of years of downgrading the medical profession and sublimating it to centrally driven target delivery at all costs. Luckily, in our practice, we were given an early insight into what was coming as one of the partners had graduated

Rather than demonising others for their interpretations we should celebrate the different perspectives

help us to accept all options as flawed. If there is respect and space for negotiation, such conflicts can be channelled into multifaceted solutions and adaptive actions.

Rather than demonising others for their alternative interpretations we should celebrate the different perspectives that those who engage rigorously with the science can bring to bear on unavoidably flawed data. The purist pursuit of an illusory, one dimensional truth is doomed to failure. Instead we must collaborate to achieve "viable clumsy solutions." By carefully evaluating how these imperfect responses unfold in messy real world settings we can help to build the urgently needed multifaceted evidence base.

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from Milan and was in touch with doctors there. Our PPE came from local DIY shops, and we had coveralls, goggles, and face visors weeks before official deliveries arrived.

There is a real risk in mythologising "frontline" healthcare workers as it fails to acknowledge there was ever an alternative. My great grandfather survived being in the Royal Army Medical Corps in 1914-18, only to succumb to flu on his return to London. His patients, including those in Ypres, contributed to a memorial statue. Our current workforce, however, deserves a policy change and not a cenotaph. Cleaners, porters, admin staff, and clinicians work for the health of the nation, and the nation should repay them all in kind.

Judith Dawson, salaried GP, Northamptonshire

ACUTE PERSPECTIVE David Oliver

Is the NHS really overmanaged?

Matt Hancock recently attacked excessive bureaucracy for constraining clinical leadership, agile service, and the digital innovation seen in the NHS during the pandemic.

Ten years ago another Tory health secretary, Andrew Lansley, made it a key plank of his white paper on NHS reform to purge it of bureaucracy, reduce managers and quangos, and give clinicians more control. The Health and Social Care Act was described by David Nicholson, then NHS chief, as a reorganisation "big enough to be seen from outer space." It was subsequently estimated by the King's Fund to have cost at least £4bn, created a far more complex organogram and quangocracy than the one it replaced, and left the NHS short of regional coordination.

Hancock and Lansley's mantras are a familiar refrain from right wing politicians. Managers represent an easy target for soundbites, linked to pledges of spending on doctors and nurses.

The King's Fund estimates that, during 2010-17, NHS managers fell by 18%. By 2018 they numbered 31 000, Warwick Business School reported, having fallen to 24 000 in 2014. Around a third were registered clinicians doubling as managers, so not really "bureaucrats"—a disparaging term beloved of politicians and the media.

The Warwick study also showed that, across NHS trusts, having more managers significantly affected performance. Even a small increase, from 2% to 3% of the workforce, led to a 5% improvement in hospital efficiency and a 15% fall in infection rates. Managers are an easy target, but the complexity of a modern health system requires excellent operational management. If they are drawn from clinical backgrounds or the NHS's training scheme and they understand its values, all the better. We also need key support services in estates, labs, engineering, IT, catering, transport, HR, and records, to give clinical staff the time to do their jobs.

There's certainly dead wood to be cut from regulatory bodies that have nothing to do with essential functions but are constructs of serial, politician led reorganisation. More still from the transaction costs and profit skimming of an internal market, the purchaser-provider split, and outsourcing, none of which is essential to public healthcare.

Hancock is right to suggest that clinicians, freed from bureaucracy, can drive change despite pressing challenges. Nigel Edwards, Nuffield Trust chief executive, recently argued in *The BMJ* that NHS management is far more centralised and politicised than most world systems and that more local solutions are often needed.

None of this is a reason for reflexive manager bashing. Without good management and support our services, care, and patients would be worse off.

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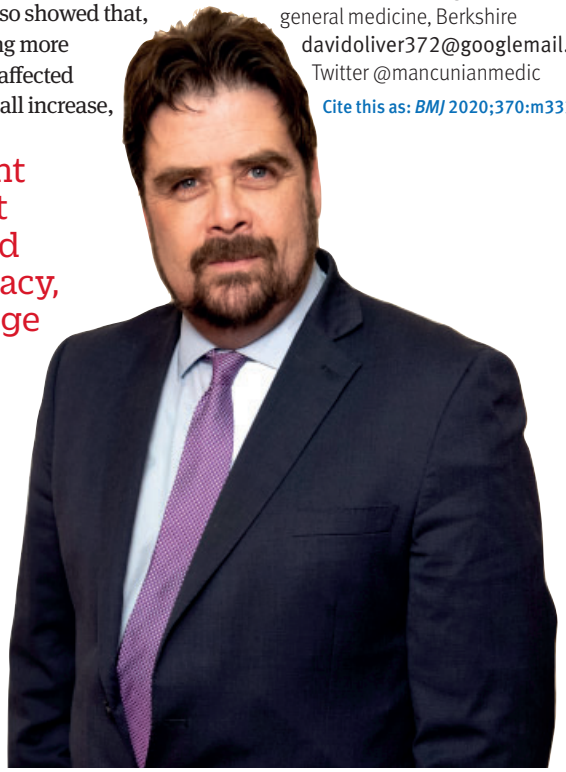
Hancock is right to suggest that clinicians, freed from bureaucracy, can drive change



PRIMARY COLOUR Helen Salisbury

Training GPs with fewer patients

A busy day in general practice can be a joy—listening carefully and asking questions, using practised examination skills to reach a differential diagnosis.

This week I felt as though I was flexing intellectual muscles at risk of atrophy during lockdown. Gradually we're seeing more patients face to face, partly because people who were reluctant to come in are less fearful but also because our threshold for asking patients to attend has fallen. Factors in this risk equation include low local prevalence of covid-19 and the fact that we have, in many cases, exhausted what we can do remotely.

Like many practices throughout the UK, we recently welcomed new trainees—the GPs of the future. Our task is to equip them with the knowledge and skills to become independent, safe practitioners, building relationships and caring for patients while also looking after themselves. We also hope to pass on some of the attitudes and values that first drew us to general practice. The trainees in turn must reflect on their progress and be assessed in multiple ways before being badged as competent.

I'm concerned about how our current mode of consulting will affect this process. Previously, trainees observed and then performed the practised GP routines of greeting, history taking, examination, and management planning with the patient. Now this pattern is fractured. The initial consultation is done by phone and, if examination is required, this is either attempted by video or arranged for a later time. If it can't be managed on the same day it's sometimes passed to another doctor or, if patients have a fever, cough, or breathlessness, they're directed to a coronavirus "hot" clinic.

It will be harder for trainees to build an understanding of how patients present in the community and how the history and symptoms relate to clinical findings. For family doctors, one vital skill is how to assess febrile children. Trainees must learn to tell which of the many grumpy toddlers they may see in a day needs hospital care, and which can safely be looked after at home. I'm not confident that this will be possible when so many families don't receive face-to-face assessments.

Remote consulting is harder, and decisions must be made with less information. Perhaps we should regard it as a refinement, a meta-skill to be mastered after the basics of GP consultation, not the starting point. Nevertheless, as GPs retire and need to be replaced, we probably can't afford to pause training to give the covid-19 cohort an extra six months to catch up. The question is: will we be able to sign off our trainees as competent if their opportunities to develop and demonstrate their skills continue to be limited by the lack of ordinary practice?

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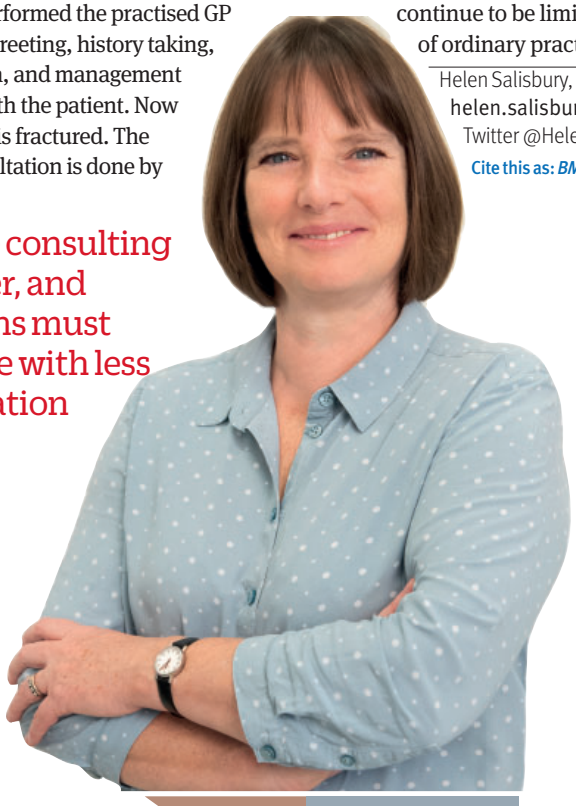
Remote consulting is harder, and decisions must be made with less information



LATEST PODCASTS

What do we know about long covid?

As we learn more about coronavirus, it's becoming apparent that it's not just an acute infection: patients are increasingly coming forward to report long term consequences of having the virus. In this podcast, Trisha Greenhalgh, a professor of primary care health sciences, discusses what we know about so called "long covid."

"One of the interesting things about this disease is that it can manifest in every organ in the body and it can give you just about every symptom in the book. Cough, fever, and fatigue are the three things that are most commonly associated with post-acute covid. But in addition, people can feel mentally exhausted, they can have mood swings, and anxiety. Some people get palpitations, a drop in blood pressure on standing up, and all sorts of weird skin rashes."

Wellbeing: the joy of socks

Doctors generally have higher levels of mental health problems than the general population, yet still experience stigma when seeking help. In this Wellbeing podcast we hear from Geoff Toogood, a cardiologist in Australia, who started the Crazy Socks 4 Docs initiative to open up conversations about depression and anxiety across the medical profession.

"We're creating a lot of awareness about mental health but we've still got to break down the stigma because it stops doctors from seeking help. One thing that astounded me about Crazy Socks was the number of countries that took it up. There must be something intrinsic in the profession that is affecting doctors no matter what country they're in, no matter where they are working, and no matter how well or how poorly they're paid. It's causing this significant issue and ultimately tragedies, unfortunately, in the medical profession."

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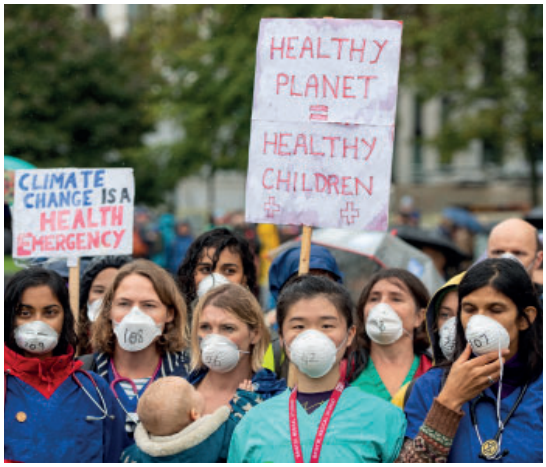
Edited by Kelly Brendel, deputy digital content editor, *The BMJ*



ANALYSIS

Integrating climate action for health into covid-19 recovery plans

Kristine Belesova and colleagues argue that any economic or social renaissance after the pandemic must safeguard the health of current and future generations in the face of the climate emergency

The covid-19 pandemic caused over a half a million deaths in its first four months and triggered a global recession that threatens to increase poverty and amplify the health effects of the pandemic. At the same time climate change is adversely affecting health, and the effects are projected to intensify worldwide through a range of direct and indirect pathways, including increased frequency and intensity of heatwaves, floods, and droughts.[1]

The effects of climate change are emerging over decades and centuries rather than the weeks and months seen for the SARS-CoV-2 virus. However, whereas there is hope for an effective vaccine or treatment for the virus, there are no such prospects for the climate emergency, and, as far as we know, the effects are irreversible. While the covid-19 pandemic is a grave human tragedy, it can be used as an opportunity to implement sustainable economic recovery policies that safeguard the health of the current and future generations including by supporting rapid reductions in greenhouse gas emissions.

KEY MESSAGES

- Our society has a responsibility to implement a sustainable recovery from covid-19 that safeguards planetary health
- Economic recovery packages should help build more resilient social foundations, including reducing health inequalities, and cut greenhouse gas emissions
- Low carbon recovery strategies will benefit the economy and health
- Lifestyle and employment changes in response to covid-19 must be harnessed to catalyse decisive action on the climate emergency
- Health professionals have an important role in promoting healthy and sustainable recovery and decisive action on climate change

Climate and wider health effects of the pandemic

The implementation of physical distancing or complete lockdown by many countries in response to the covid-19 pandemic has resulted in big reductions in economic activity. This in turn has resulted in large reductions in air pollution and greenhouse gas emissions in many places. Estimates suggest that daily global CO_2 emissions decreased by 17% (11% to 25% for ±1 SD) in April 2020 compared with the mean emission levels in 2019.[2] Annual emissions could decrease by 4% to 7% (2% to 13%), depending on the lockdown duration.[2] Satellite images recorded reductions in $PM_{2.5}$ and NO_2 concentrations in some of the examined areas (eg, China and northern Italy) compared with the seasonal levels observed in previous years, although levels were unchanged in others.[3] Latest estimates suggest that the direct effect of the response to the pandemic on climate change will be negligible, with a cooling of approximately 0.01°C (95% confidence interval 0.005 to 0.015) by 2030 compared with the trajectory that follows current national policies.[4]

Experience of previous economic shocks shows that reductions in emissions are likely to be transient. The fall in greenhouse gas emissions with the 2008 recession, for example, was followed by a resurgence that exceeded pre-recession levels.[5] Increased post-lockdown production and lower availability of investment capital for low carbon energy may result in a similar emission pattern. Latest estimates suggest that there is already a partial rebound in emissions with the easing of lockdowns.[2]

Economic recession is driving some populations into poverty and, in some countries, increasing health inequities

The current economic recession is driving some populations into poverty and, in some countries, increasing health inequities, which in turn could increase the risk of adverse outcomes from covid-19.[6] The 2008 recession had pervasive effects on health, particularly among men, with declining self-rated health and increasing morbidity, psychological distress, and suicide, although traffic fatalities and population level alcohol consumption declined.[7]

National responses to the recession largely determined the magnitude and distribution of health effects. Social safety nets and long term investments in health systems in some European countries seemed to protect populations against adverse effects.[8] A 5% contraction in income or consumption due to the covid-19 pandemic could force an estimated additional 85 million people, mostly in developing countries, below the international poverty threshold of $1.90 (£1.50; €1.60) a day; 419 million people would be similarly affected by a 20% contraction.[9] The current economic shock emphasises the need for planned equitable transition from economic growth powered by fossil fuels to policies that ensure health and other social priorities within environmental boundaries.[10]

Building a better transition to a net zero carbon economy

By May 2020 governments and central banks had committed to a $15tn fiscal stimulus globally in response to the pandemic, equivalent to 17% of the global economy.[11] The UN secretary general António Guterres and other leaders called for investment of the recovery funds into "building back better" to support a more sustainable, inclusive, and equitable economy that addresses climate change.[12] The EU leaders have proposed a recovery plan based on decarbonisation and digital transformation under the European green deal.[13]

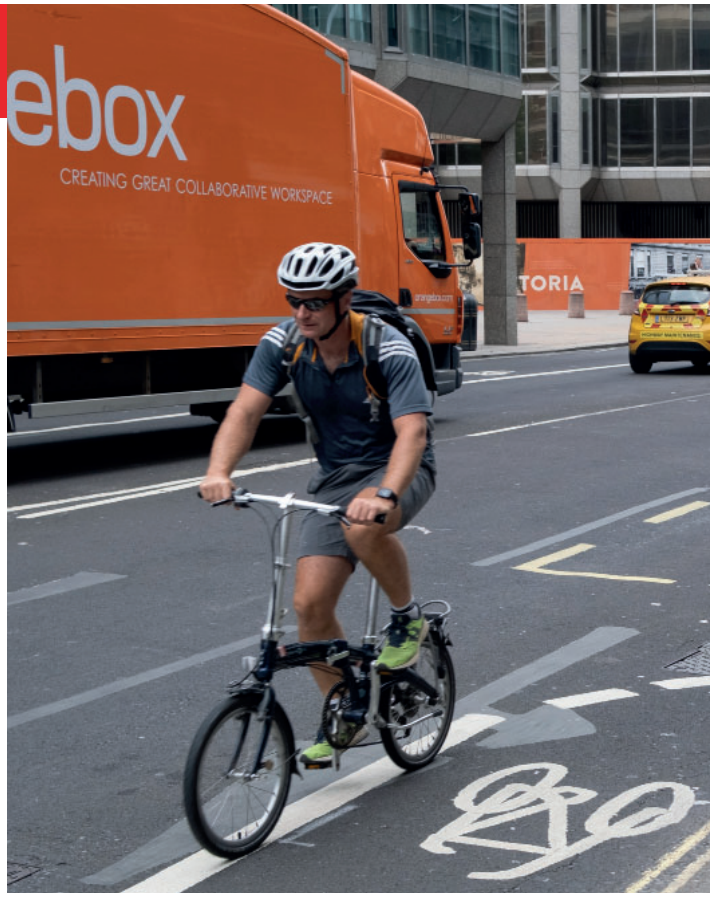
An expert assessment of an early set of fiscal recovery packages suggests, however, that only 4% have the potential for long term reduction of greenhouse gas emissions; 4% are likely to increase emissions, and 92% would sustain the pre-crisis emissions trajectory.[14] The emergency rescue response prioritises the injection of liquidity to prevent economic collapse and meet the immediate needs of saving lives and protecting populations, health systems, and livelihoods. Recapitalising firms that have been badly affected by the recession is an opportunity to integrate health, environmental sustainability, and economic recovery by using criteria that reflect these objectives to prioritise the use of government funds.[15]

Climate action has been hampered by the complexity of the challenges, indirect and complex attribution of the effects, vested interests in maintaining business as usual, and denialist efforts to influence public opinion. The aspirational target of keeping the global average temperature increase below 1.5°C by 2100 requires 7.6% reduction of global emissions each year between 2020 and 2030.[16] That requires the countries to increase their nationally determined contributions to emission reductions under the Paris climate agreement fivefold from their December 2019 levels.[16] Recovery packages that facilitate the removal of fossil fuel and other harmful subsidies and invest in transition to a net zero-carbon economy can substantially contribute to this goal, helping to avoid future warming of 0.3 °C by 2050,[4] and bring sizeable benefits to human health. Phasing out fossil fuels could, for example, avert about 3.6 million premature deaths related to air pollution annually in the near term, and mitigate climate change effects in the medium to long term.[17] Global action required to meet the 1.5°C target is estimated to deliver an economic benefit of $264tn-$610tn by 2100.[18]

Employment opportunities

Over the first three months of lockdown in the US, more than 45 million people claimed unemployment benefits and jobs in the oil and gas sector declined by 12%.[19 20] The oil and gas sector is now experiencing its greatest ever crisis. In the absence of new investment this could accelerate major structural changes away from fossil fuels.[21] Investment in oil and gas would have negative public health and climate effects and would be less effective in supporting livelihoods than investment to support the zero-carbon transition. Every $1m spent supporting fossil fuel industries would generate only 2.65 full time jobs compared with an estimated 7.49 and 7.72 full time jobs for the same investment in renewables and energy efficiency.[22] It would also contribute to increased health risks for workers and residents in the vicinity of fossil fuel extraction.[23]

In the UK, transition to a circular economy based on recycling, remanufacturing, reuse, and shared services could create between about 200 000 and 500 000 new jobs and reduce dependency on vulnerable supply chains.[24] The government subsidised unemployment and furlough time could be used to invest in human capital by developing job and entrepreneurial skills required for a net zero-carbon circular economy, including through online training.



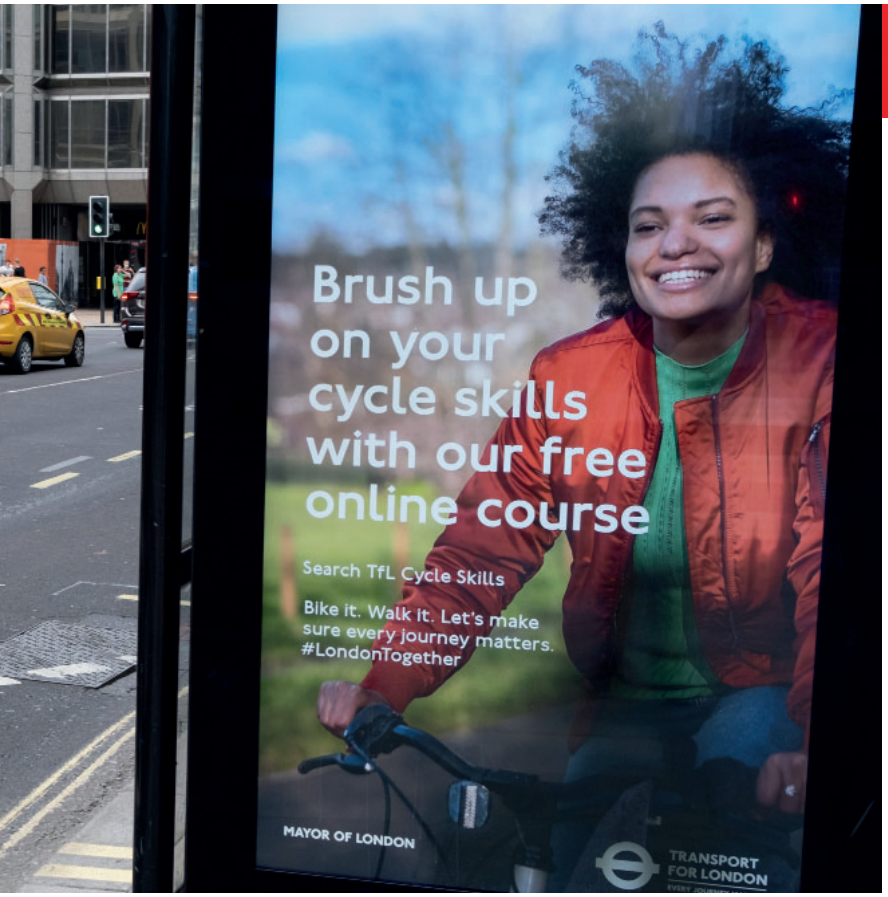
Only 4% of fiscal recovery packages have the potential for long term reduction of greenhouse gas emissions

Building on behaviour change

When habits are temporarily disturbed, people are more sensitive to new information and may adopt a mindset that is more conducive to behaviour change.[25] People have drastically changed their lifestyles in response to covid-19. Some of these changes reduce greenhouse gas emissions and have health benefits. City governments in Mexico City, Bogotá, New York, Milan, Paris, Berlin, and London responded by allocating more street space for pedestrians and cyclists to facilitate physical distancing and promote physical activity.[2] The reduction in motorised traffic was the largest driver of falls in global emissions during the lockdown.[2]

The urgency of having to make these changes in response to the pandemic helped overcome some of the barriers to active travel and reduced consumption of non-essential goods and international travel. This could provide momentum to lock in the behaviour changes that benefit health and the environment and might catalyse a shift from a consumerist culture to a more sustainable economy.

Translating the temporary behaviour changes into permanent



RICHARD BAKER/IN PICTURES/GETTY IMAGES

culture change could be supported through the development of new infrastructure, such as converting roads into pedestrian and cycle lanes, and new policies, including incentivising more flexible working from home, virtual meetings and medical consultations, and less long distance business travel.[26] Such policies could help compensate for reduced public transport capacity and avoid a rebound in car use in urban areas as a means of physical distancing. For example, cycling (including electric bicycles for longer journeys and for elderly and some disabled people)[27] is likely to be the best way of getting around urban centres while maintaining a safe distance between commuters.

Although in some cities policies and sustainable infrastructure installed in response to covid-19 were temporary, other cities, such as Milan and Paris, committed to making them permanent.[28] A case study of transport policy in Ireland shows that times of financial prudence combined with advocacy can allow sustainability initiatives to flourish without the need for radical institutional transformation.[29] There is some evidence that in the right circumstances, disasters can act as a spur to major policy change such as after the 2004 tsunami in Indonesia and Sri Lanka and the 2011 earthquake in Christchurch, New Zealand.[30 31] Confidence in authority, the high status of science in policy making, inclusive leadership, and a well articulated and coherent vision for a sustainable and healthy society facilitated these positive changes.

The covid-19 pandemic differs from these events in scale, scope, extent, and its global context. It will therefore be vital to build a positive case for the zero-carbon transition as we emerge from covid-19, emphasising the health benefits from climate change mitigation policies, particularly through reduced air pollution, increased physical activity, and healthy diets with a low environmental impact.[32 33]

Such policies cross a range of sectors, including energy, transport, housing, urban planning, food and agriculture, industry, and healthcare. Reducing deforestation and tackling the drivers of land degradation and freshwater depletion from unsustainable patterns of food production can benefit health, biodiversity, and the climate.[34] Reducing exposure to air pollution, increasing physical activity, and consumption of healthy diets reduce the risks of heart disease and stroke, which in turn influence the risk of adverse outcomes from covid-19.[6]

Advocacy for green recovery

Opinion polls in 16 countries have shown that most people expect the environment to be prioritised in recovery packages.[35] Large majorities of respondents supported the proposition that we have a responsibility to protect the planet for future generations, and that environmental degradation poses a major threat to health. In the UK, a climate litigation charity warned the government of legal action against inadequate investment in a "green" recovery.[36]

How can health professionals respond to support the required profound economic changes in the face of entrenched interests, such as fossil fuel industries? They could start by making their voices heard in the lobbying for resources. The recent letter from representatives of 40 million health professionals to the heads of G20 governments urging investments in a zero-carbon, healthy recovery is an example of the leadership needed.[37] They could also support the UN and national actions to create a healthy, low carbon economy. WHO, for example, has issued a manifesto calling for a healthy emergence from covid-19 comprising protection and preservation of nature; investment in essential services; rapid decarbonisation of the energy system; promotion of healthy sustainable food systems and cities; and stopping the use of taxpayers' money to fund pollution, including halting the $400bn direct fossil fuel subsidies globally.[38]

Health professionals can also act to address the climate emergency in their daily work—for example, by supporting the decarbonisation of health services, reducing waste, encouraging reuse of supplies where feasible, promoting healthy sustainable lifestyles, and leading by example.[39] Another role is to work with non-governmental organisations bringing health perspectives to advocacy for climate action.

The next year or so will bring major opportunities to unite global actors in decisive action to protect and promote the health of human populations and natural systems. This imperative should motivate increased ambition at the postponed 26th UN climate change conference in Glasgow, UK, in November 2021 and at the 15th Conference of Parties to the Convention on Biological Diversity in Kunming, China. Health professionals can play important and potentially decisive roles in promoting a healthy and sustainable recovery from covid-19 to safeguard the health of current and future generations.

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EDITORIAL

The demise of Public Health England

Recasting the nation's public health structures at this time seems extremely foolhardy

The announcement, made through the pages of a Sunday newspaper, that Public Health England (PHE) was to be unceremoniously dumped comes amid the world's most serious public health crisis in a century.[1] But this debacle has been a long time in the making.

In the past decade the tide of progress has turned, for both the health of England's population and its public health system. The routine and almost continuous improvement in life expectancy has stalled, and for many of the worst off, life expectancy has fallen.[2] Routine public health indicators—for example, immunisation rates and drug related deaths—have been going the wrong way.[3 4]

Achievements in public health in England have always been a matter of national pride. Whether it is the personal contributions of figures such as Edward Jenner, John Snow, Kitty Wilkinson, and Richard Doll, or the "sanitary revolution" heralded by the passage of the Public Health Act in 1848, there has always been a sense of moving forward towards better health for the population.

Serial white papers from governments of different political complexions set targets for improving health and, at times, new resources flowed into public health.[6 7] Progress was achieved on key concerns such as tobacco, teenage pregnancy, and substance misuse, despite the sometimes damaging backwash from successive NHS "re-disorganisations."

All change

All this progress counted for nothing after the 2010 general election. The coalition government swept away much regional and local infrastructure in England. The 2012 Health and Social Care Act abolished strategic health authorities and primary care trusts. Public health responsibilities transferred to top tier local authorities, to the new national body, PHE, or, in the case of immunisation and screening, to NHS England. After directors of public health and their teams transferred to local authorities they were, in many places, stripped of resources and lost power and influence.

Duncan Selbie, the founding chief executive of Public Health England

Work on health inequalities, obesity, tobacco, alcohol, and other vital public health problems must not be forgotten

The Health Protection Agency and the National Treatment Agency for Substance Misuse also disappeared. PHE, which took over the responsibilities of these two public bodies, was organisationally an integral part of the Department of Health, with the secretary of state having, "a clear line of sight from the top of government to the frontline."[9] The staff were employed as civil servants, and the organisation had no discernible independence, not even its own website.

PHE has hardly been a success as an organisation and during the pandemic has often been criticised by politicians. Much of this criticism is unfounded. PHE was never intended to be a mass provider of microbiological testing services. Although a predecessor organisation, the Public Health Laboratory Service, once had an extensive network of laboratories, these were transferred to the NHS some years ago and the network largely dismantled. At a community level PHE's local health protection teams have often been an important part of the response to dealing with clusters and flare-ups of covid-19 cases.

PHE has now been replaced by a National Institute for Health Protection, which seems remarkably similar to the Health Protection Agency abolished in 2013. It will also encompass the two organisations created in the middle of the pandemic, the Joint Biosecurity Centre and NHS Test and Trace.

Unfavourable omens

Given the poor performance of the newcomers so far, the omens for this new construct are not favourable. The government's innate desire to centralise and control is in full flow despite calls for more resources to be devolved locally and coordinated at regional level. Even worse, past experience shows that every time public health goes through a major reorganisation it loses at least 20-30% of its skilled and experienced staff.

A big question mark hangs over the non-health protection elements of PHE's responsibilities. Work on health inequalities, obesity, tobacco, alcohol, and all the other vital public health problems facing the country must not be forgotten in the vicious blame game that will undoubtedly ensue when responsibility for the UK's disastrous performance in the covid-19 pandemic is allocated.[10]

The pandemic is far from over. Unless there is a substantial change of policy and the government develops a feasible strategy, the path ahead looks distinctly treacherous for some time. Choosing this moment to completely recast England's public health structures looks foolhardy in the extreme. Not so much a strategic change of direction but more like throwing your cards up in the air in the hope you end up with a better hand.

Gabriel Scally, visiting professor of public health, University of Bristol, gabriel.scally@btinternet.com

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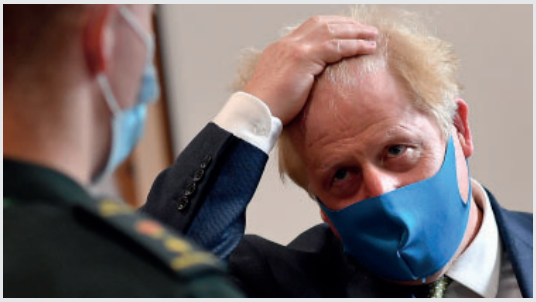
LETTERS Selected from rapid responses on bmj.com

LETTER OF THE WEEK



Covid-19 inquiry: ducking, ducks, and anatidaephobia

While we await the inevitable public inquiry into the UK's management of covid-19 (This Week, 25 July-1 August), it is only fair to note that the situation is without precedent. But that is the very reason disaster planning exists and, notably, the UK was until recently a global leader in pandemic preparation.

As politicians aim to get their ducks in a row regarding what they knew and when, how they acted and on what basis, it is fair to ask whether some—not least our sesquipedalian prime minister—will have a degree of discombobulating anatidaephobia.

The commendable openness of daily press conferences highlighting death rates, test and trace data, and personal protective equipment problems means little new may emerge from an inquiry. Instead, responsibility for one of Europe's highest death rates needs to be apportioned.

The reason this is both crucial and urgent is not accountability but the need for better performance.

While Brexit, the potential dissolution of the UK, and international politics may be where government wishes to focus, prevention of catastrophe in the form of resurgent covid-19—this time accompanied by usual winter pressures and the consequences of accumulated missed healthcare interventions—is the national priority.

Jason Beer QC suggests a public inquiry answers three questions: what happened; why did it happen and who is to blame; and what can be done to prevent it happening again.

Laboured inquisitional processes, such as the Levison inquiry, are unsuitable given the imminent peril. Answering the third question is key.

This matter cannot be avoided. A moral imperative exists to complete a rapid, transparent inquiry into the UK's covid-19 performance. The primary aim is not to apportion blame but to improve national performance for any resurgent pandemic with likely extreme consequences for health and social care.

Joe Brierley, director of bioethics and consultant intensivist, London

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DOCTORS' PAY RISE

Don't be deceived, it's not for covid-19

The proposed pay rise for doctors and other medical staff in England and Wales is not what it seems (This Week, 25 July-1 August).

All staff covered by Agenda for Change are excluded. So, too, are junior doctors in England. The reason many frontline professionals are disregarded is that a business-as-usual annual increment has been marketed as a reward.

Public sector employees have their salaries appraised by independent review bodies. This year, the government has accepted "the headline recommended rise for each workforce" to reflect "the enormous effort made" during the pandemic. Selected staff have been excluded because their negotiated pay deal already accounts for business as usual. Thus, the recommended rise creates appropriate parity across the workforce and is not a reward.

The doctors' and dentists' review body stated that its recommendations did not account for covid-19, urging that governments consider "additional" recognition.

I hope that the government will take notice.

Mary Slingo, specialty trainee year 6 in anaesthesia, Portsmouth

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COVID-19: RISK IN BAME STAFF

Covid-19 risk assessment: a mandated futile gesture

The NHS has embarked on a nationwide covid-19 risk assessment programme with good intentions (BMJ Investigation, 18 July).

But the whole exercise—done by line managers instead of occupational health departments because of resource constraints—could end up a metaphorical strip search. The risk assessment process, with its blurring of personal and work boundaries, could be embarrassing for those who value their privacy.

The overall benefit to staff, particularly staff from ethnic minorities, is uncertain.

Complex socioeconomic, cultural, and immunological and genetic factors in ethnic minorities seem to be the predominant driving force behind higher mortality rather than widespread blatant institutional racism. But countless person hours are now being wasted on a centrally mandated futile gesture.

Instead, a nationwide prospective case-cohort study and an interventional study evaluating the effectiveness of various mitigating aspects are needed to identify and alleviate the factors behind increased susceptibility of ethnic minority staff to covid-19.

Santhanam Sundar, consultant oncologist, Nottingham

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OUTBREAK

Stay calm and take prompt and decisive action

Rimmer reflects on the term outbreak (Sixty Seconds, 25 July-1 August).

An outbreak is always caused by the same organism. It is not enough that it is caused by the same species: it must also be the same type or subtype of the organism.

Outbreak in patient safety parlance is an alarm signal indicating that two or more patients have been affected and that urgent action is required not only to manage the cases that have already emerged but also to prevent the occurrence of further infections.

An outbreak carries with it the implicit understanding that it is avoidable, which means it has a higher weighting of risk in the world of risk management.

For these three reasons, we must retain the term and its use when indicated.

The heart of the matter is to stay calm but at the same time take prompt and the right decisive action.

Walid Al-Wali, senior consultant medical microbiologist; Naser Asad Al-Ansari, senior consultant microbiologist, Al Wakrah, Qatar

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OBITUARIES

Mary Ostlere

Consultant anaesthetist Queen Mary's Hospital, Sidcup (b 1924; q Edinburgh 1947; FRCA), died in her sleep on 3 March 2020

Mary Patten ("Jo") met her husband to be, Gordon (the author Richard Gordon), in Oxford, where they were both training in anaesthetics. They married in 1951 and Jo stopped work to raise their four children. She proofread Gordon's many works, and together they co-wrote one book (*A Baby in the House*). In the late 1970s she retrained at Guy's and went on to work as a consultant anaesthetist at Queen Mary's Hospital, Sidcup. Jo was kind, measured, unflappable, and always a good listener. She enjoyed reading *The BMJ* into her late 80s. Jo and Gordon were completely devoted to each other throughout 65 years of marriage. She leaves four children (two of whom are doctors), nine grandchildren (one a doctor), and two great grandchildren.

Simon Ostlere, Lucy Cussans

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Elizabeth Wales

Medical practitioner (b 1923; q University of Durham 1949; DCH Eng, DPH Leeds, DObst RCOG, MFCM), died from frailty of old age at home on 20 May 2020

Elizabeth Wales was born in Low Fell, Gateshead, and studied at Newcastle Medical School, which was part of the University of Durham. After working in Hull, she moved in 1963 to Esher, Surrey, and worked for the Department of Education and Science. She was involved in the planning of new hospitals in the north east of England and assessing special needs schools and the children who attended them, which she loved. In retirement she pursued many interests and travelled extensively. In 2017 she was diagnosed with dementia but was able to remain at home with good care. She was much loved by her family and leaves her sister, two nieces, and their families.

Joan Stephens, Sarah Ward, Louise Wallace-Jones

Cite this as: *BMJ* 2020;369:m2574

Iain James Mungall

General practitioner (b 1945; q Newcastle upon Tyne 1968, FRCGP), died from pancreatic cancer on 23 December 2019

Iain James Mungall settled in general practice in Bellingham, Northumberland, where he remained until he retired in 2006. This scattered practice—which stretched from the Scottish border to the River Tyne—fostered a deep concern for the issues facing rural practice, as secondary care moved to ever larger and more centralised institutions. Iain lobbied passionately for his patients and was a respected trainer and director of the local GP training programme. In 2011 he was successfully resuscitated after a cardiac arrest on a yacht off the coast of Montenegro and subsequently, after bypass surgery and the insertion of a ventricular defibrillator, was able to return to full activity. Sadly he developed pancreatic cancer shortly after marrying Gill, his second wife. He leaves Gill; his first wife, Carol; three children; and seven grandchildren.

Graeme Oliver

Cite this as: *BMJ* 2020;369:m2570

Dianne Mary Burton

Consultant child and adolescent psychiatrist (b 1941; q Bristol 1965; DPM, FRCPsych, FRSM), d 5 March 2020

Dianne Mary Burton worked as a full time consultant from 1979 until she retired. She led a newly expanding community team, developed in collaboration with local paediatricians, social services, and educational psychological service, which reflected her lifelong commitment to an interdisciplinary approach. Dianne's therapeutic skill and ability to engage with children were at the heart of her work. She pursued a range of therapeutic approaches. She was a valued mentor and consultant, and promoted the importance of close liaison with schools when a young person was experiencing real difficulties there. Her engaging personality brought her many loyal friends—adults as well as children—who valued her wise support, lively intelligence, and sense of fun. She leaves her husband, Ian, whom she met at Bristol.

Sarah Hubbold

Cite this as: *BMJ* 2020;369:m2568

Ron Singer

General practitioner (b 1948; q Cambridge, 1973; MRCGP), died from myocardial infarction on 28 May 2020

Ron Singer's early ambition to become a haematologist was thwarted when he developed keratoconus. He changed direction to healthcare of the elderly and then general practice after the first attempts at corneal transplants failed. Ron was an uncompromising socialist. In 1975 he had a leading role in the junior doctors' strike to shorten the 80-120 hour working week. Forty years on, he campaigned with the junior doctors at that time, supporting them in their strike against the attempt by the health secretary, Jeremy Hunt, to impose an "unsafe and unfair" contract. He continued his activism until he died, although he had his first heart attack in 2006 after being diagnosed with polycythaemia in 2005. Ron loved music and was an accomplished trumpet player. He leaves his wife, Jan; his sister; and two stepchildren.

Jackie Applebee, Kambiz Boomla

Cite this as: *BMJ* 2020;369:m2572

Victor Miller

Consultant paediatrician (gastroenterology) Booth Hall Children's Hospital and Royal Hospital for Sick Children; honorary lecturer in paediatrics and child health University of Manchester (b 1935; q Glasgow 1961; MRCPS, FRCPS, FRCP), died from covid-19 (multiple organ failure) on 2 April 2020

Victor Miller was the younger son of refugees. In February 1966, en route to marrying Judy, he applied for the role of registrar at Great Ormond Street Hospital, proposing to specialise in paediatric gastroenterology. He developed this new discipline alongside colleagues worldwide. As senior registrar in Manchester, he moved between Booth Hall and other local hospitals and lectured at the university. He took up the NHS's first ever consultant post in paediatric gastroenterology. In retirement he did an MA in comparative religion. Predeceased by Judy, Victor leaves his partner, Valerie; two daughters; and their families.

Laura Miller

Cite this as: *BMJ* 2020;369:m2569

Anna A Artaryan

Paediatric neurosurgeon who created the first chair in the specialty

Anna Artashesovna (Arkadievna) Artaryan, MD, PhD (b 1922; q Baku State Medical Institute, 1944; MD, PhD), died from acute heart failure on 22 May 2020

Anna Artaryan ("Neta") was born into an Armenian family of a lawyer in Baku, Azerbaijan. Both Neta and her elder sister, Seda, played the piano. Neta attended a musical college and was a music lover throughout her life. In 1940 she became a student at Baku Medical Institute (now Azerbaijan Medical University).

During her medical studies, which lasted only four years owing to the second world war, she worked as a nurse at the surgery clinic. She was fluent in German and was called up to the army shortly after graduating, becoming head of a primary healthcare unit for internal security troops in the Donbass region. She descended into the mines to treat casualties and visited prisoner of war camps.

Specialist training

Artaryan was discharged from the army. On her return to Baku in 1946 she could not find work and moved to Surakhan region, where she set up a hydropathic establishment and stayed for two years. She wrote letters to Moscow and Leningrad, asking for a specialist training place in neurosurgery.

A positive reply came from the Academy of Medical Sciences of the Soviet Union in Moscow. When Artaryan arrived at the Burdenko Neurosurgery Institute in 1949 she was rejected by the deputy director, so she waited until the institute's director, Boris Egorov, returned from holiday.

Artaryan developed a technique for removing cerebellar tumours without damaging cerebellar nuclei

Egorov sent her to Andrei Arendt, who, in 1946, had organised a department for women and children at the Burdenko Neurosurgery Institute (which later became a department for paediatric neurosurgery). He was surrounded by a group of dedicated women surgeons who treated him like a king. He persuaded Artaryan to promise him that she would dedicate her life to paediatric neurosurgery.

After a two year residency, Artaryan entered a three year doctoral programme. Her thesis was on the blood supply of cerebellar tumours. She conducted her research at the laboratory of neurosurgical anatomy and experimental neurology headed by Samuil Mikhailovich Blinkov (1904-96), the professor who had suggested the topic. In 1958 she defended her dissertation and married Blinkov, who was 18 years her senior. There was no wedding ceremony and after their marriage was registered they went to a restaurant.

Cerebellar tumours are most common in children. Their diagnosis and treatment became a subject of Artaryan's *doctorskaya* dissertation (needed to apply for professorship in the Soviet Union). She developed a technique for their removal without damaging cerebellar nuclei, which yields better neurological restoration. The dissertation was defended in 1973 and published as a book in 1979.

Chair of paediatric neurosurgery

From 1969 Artaryan taught paediatric neurosurgery to neurosurgeons, general surgeons, and neurologists, developing her own curriculum. The first chair of paediatric neurosurgery in the Soviet Union (and probably worldwide) was created in 1981 at the Central Institute for Advanced Medical Education by a special decree of the Soviet Ministry of Health. Artaryan held this chair for more than 30 years. She was convinced that paediatric neurosurgery might be a separate specialty since children's anatomy and physiology are different from those of adults. A course would take one to three years and included lectures, seminars, and observation of neurosurgery interventions. She and her colleagues often taught courses in different parts of the former Soviet Union. Artaryan's clinical and research interests shifted to head injuries and intracranial haematomas in infants and children. She worked well into her 90s, although she was frequently incapacitated by multiple bone fractures as a result of her osteoporosis. The walls of her office featured portraits of Arendt, Blinkov, and Egorov. In 2012 she was elected an honorary member of Russian Associations of Neurosurgeons.

Symbolically, Artaryan died on the same day as Saturn, the famous alligator in Moscow zoo, who had miraculously survived the bombing of Berlin zoo in 1943 and was presented by British soldiers to the Soviets in 1946. Like Artaryan, Saturn had a strong character and lived an unusually long life. A statement from Moscow zoo might easily apply to Artaryan: "For us she was an entire era, and that's without the slightest exaggeration. She saw many of us when we were children. We hope that we will not disappoint her."

Predeceased by her husband and sister, Artaryan leaves a niece.

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