> Morale is a precious thing. Forcing staff to have a yearly vaccine of uncertain effectiveness is an odd use of authority

NO HOLDS BARRED Margaret McCartney

Mandatory flu jabs won't fix the NHS

Bruce Keogh, the national medical director for NHS England, recently called for a "serious debate on mandatory flu vaccination." And the chief medical officer for England, Sally Davies, has indicated her support for mandatory flu vaccination for NHS staff. This would be a mistake.

Hepatitis B vaccination, for example, is a highly evidence based programme, usually requiring only three doses for lifelong protection. Flu vaccinations must be repeated every year, meaning a need for long term cooperation. Also, the benefits to healthcare workers (and hence patients) from flu vaccination are not so clear. Flu vaccinations may not work terribly well, and forcing staff to have a yearly vaccine of uncertain effectiveness is an odd use of authority.

We all know that the good ship NHS is kept afloat through difficult times because healthcare staff give their time and energy beyond the letter of their contract. Morale is a precious thing, and it can be buoyed as well as scuppered. Staff may reasonably ask about the relative effect of overcrowded wards on the spread of infection, staff ratios, and patient safety. Perhaps we should consider mandatory flu vaccination for staff after we've sorted safe staffing ratios and bed numbers.

Other uncertainties are worth contemplating. Research has found a link between increased flu vaccination and decreased sickness absence. This may reflect better organised trusts being associated with less sick leave. Vaccinated staff who believe that they are protected against flu may not in fact be (the effectiveness of the vaccine was 41% in adults under 65 in 2016-17), and they may attend work when mildly unwell, presuming that it's not the flu and potentially transmitting the virus.

The benefits of flu vaccination for staff are probably seen best in care homes. Cluster randomised controlled trials in the UK have found lower death rates and health service use where care home staff are vaccinated. This would be an obvious place to ensure that flu vaccines are routinely offered.

Locally, however, many staff working in private nursing homes have told me that they'd like to be vaccinated but haven't been offered it. Some healthcare workers have told me that they've been unable to book—or find—occupational health appointments, such are their shift patterns. Easy access should be mandatory first.

The best places to work are those where we find mutual respect. The mandatory vaccination argument feeds a line to the media that the stress on the NHS is caused by staff failings: yet it's those staff who hold up the NHS despite everything it's subjected to.

We'd be in a different situation if healthcare workers were offered vaccination with a full admission of its uncertainty, as well as a clear commitment to tackling organisational stress systematically. This, at least, might feel like the kind of relationship we'd want with our patients.

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OBSERVATIONS Krishna Chinthapalli

Trump: winning with the MoCA

The US president took the Montreal cognitive test as part of his annual medical exam

Donald Trump recently made the headlines for taking the Montreal cognitive assessment (MoCA) screening test as part of his annual medical examination. It originally wasn't included in the US president's assessment, but his physician, Ronny Jackson, says: "The reason we did the cognitive assessment is plain and simple—because the president asked me to do it. He said 'Is there a test or some type of screen that we can do to assess my cognitive ability?'"

"I looked at a variety. We picked one that was a little bit more involved. It was longer. It was the more difficult one of all of them."

It comes after several high profile psychiatrists expressed concerns about Trump's mental health. And how did Trump fare? "More #winning. 30 out of 30," his son, Donald Jr, tweeted afterwards. This merely means that Trump is unlikely to have mild cognitive impairment or early Alzheimer's disease. It does not test judgment, personality, or other aspects of the mind.

Cherry on the top

The MoCA was devised by Ziad Nasreddine, a Canadian neurologist who has been interviewed by global news outlets. "As a neurologist and researcher, I'm very happy with the recognition of the MoCA—though the website went down, with 600 000 requests per minute. I have been proud of the rapid uptake globally, this is the cherry on top," he told *The BMJ*.

In 1996, Nasreddine was working at a memory clinic in Montreal. "We had no neuropsychologists, and I found that full testing took up to two hours for each patient so I was only seeing two or three patients a day. All the existing screening tools were for established dementia and not comprehensive in the different cognitive domains. So I decided upon a 10 to 15 minute 'scan' of the brain.

"If we imagine the mini-mental state examination (MMSE) is an x ray and full neuropsychometric testing is a magnetic resonance imaging scan, the MoCA would be like a computed tomography scan that clinicians could use for rapid screening for mild cognitive impairment. I tried to maximise efficiency with easily scored and validated items that could fit on one page. Items that were not as useful in early dementia were omitted."

In 2005, Nasreddine and colleagues published a validation study with a small number of patients showing that the MoCA had up to 90% sensitivity for mild cognitive impairment compared with 18% for the MMSE. This sparked interest around the world. At the outset, it was designed in English and French for use in Montreal. "We granted permission for translations when asked by dementia researchers in other countries," Nasreddine says. "Now it is available for 65 languages."

Donald Trump took the MoCA test, top right, devised by Ziad Nasreddine

A validation study showed the MoCA had up to 90% sensitivity for mild cognitive impairment

ACUTE PERSPECTIVE David Oliver

Do sensors on hospital beds and chairs really stop falls?

In December a coroner's narrative verdict was widely covered in the media. "Frail hospital patients put at risk for want of basic equipment costing less than £100, coroner warns," reported the *Telegraph*. The verdict concerned Ken Swift, 80, a retired nurse who had been admitted to York Hospital with pneumonia. He fell from his hospital bed and sustained a hip fracture, which the coroner said was likely to have contributed to his death.

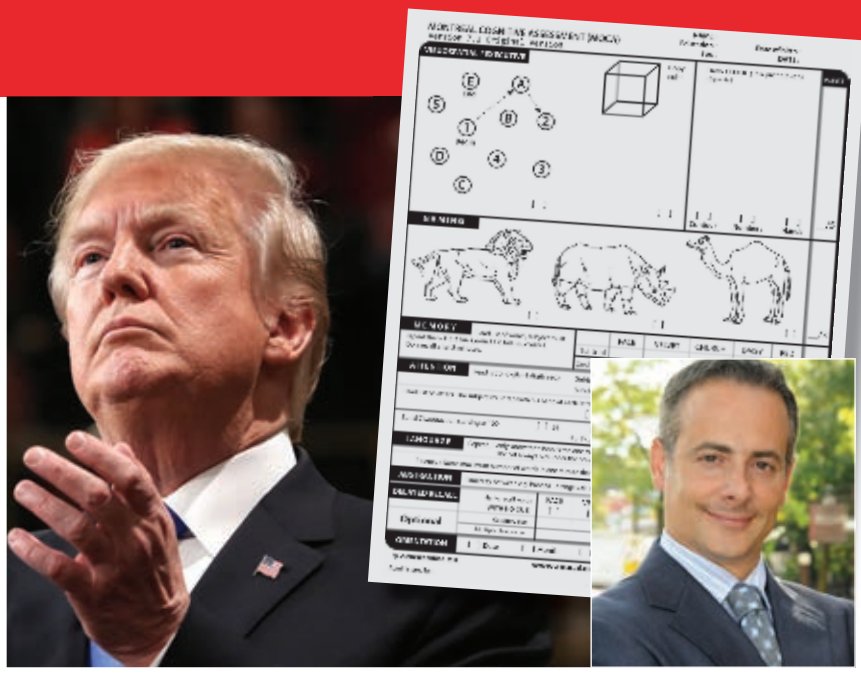
Bed and chair sensors had been recommended as part of Swift's care plan. These devices trigger an alarm or warning light if patients leave their bed or chair for a few seconds. Staff can then, in theory, respond quickly and intervene to prevent a fall or assist the patient. Maybe the alarm reminds the patient (if not too confused) to sit back down or alerts visitors or other patients in the ward bay. The coroner noted that such devices cost under £90, that over 30 of the hospital's patients were on a waiting list for one, but that the hospital didn't have enough sensors.

We can't engineer falls, or the risk of them, from systems. Their occurrence doesn't automatically represent poor care

Clinical trials give us a considerable evidence base around interventions to prevent falls in institutional settings, set out clearly by the Cochrane Collaboration, the National Institute for Health and Care Excellence, and detailed evidence commentaries. What emerges is that, in trials, even multi-pronged approaches to preventing falls will reduce them by around 20% at best. Trials are rarely powered sufficiently to detect reductions in serious injuries such as fractures, even when pooled for meta-analysis. They rarely incorporate balancing measures around potential harms from immobility and loss of function.

If we look specifically at evidence from clinical trials of bed and chair sensors and fall alarms we find only very weak evidence that they work at population level, even if some staff or individuals at risk may be helped or reassured by them. The routine use of sensors isn't recommended in good practice guidance.

We should also consider their downsides. For many patients who have dementia or incident delirium, having an alarm sound every time they try to leave their bed or chair could worsen their distress and disorientation and could be considered a form of restraint. Alarms are also unsettling for patients in other



He has developed further versions, including for blind or illiterate people, as well as online training. An electronic version can assess the time taken to answer as a measure of processing speed. The newest edition of the written test includes a second score to assess delayed recall, and using this score may assist prediction of how long it takes for people with mild cognitive impairment (MCI) to develop Alzheimer's disease.

Free to use

Perhaps most importantly, Nasreddine says the MoCA is distributed and used without permission by health professionals and universities. He has no plans to change this. This is in stark contrast to the MMSE, now only available for $1.62 (£1.14) per form, with heavy restrictions including not showing the test to patients.

Nasreddine's latest project is to develop another test, to assess driving ability. "We are asked about driving by nearly every patient with mild cognitive impairment or early dementia and it is difficult to answer based on current tests," he said.

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beds—adding to noise pollution, poor sleep, and their own risk of delirium. If we're trying to improve patients' independence after acute illness or injury, sensors could actually worsen the cycle of immobility and deconditioning.

We can look outside the evidence from randomised clinical trials, with pre-specified intervention protocols and time limited interventions. Some examples of pragmatic quality improvement approaches are promising, such as "safety huddles" or care bundles, where interventions are refined and implemented through "plan-do-study-act-evaluate" cycles. I totally support such pragmatic approaches, although we still need to look at the opportunity cost from focusing excessively on fall prevention. Falls and subsequent injuries will happen among older, frailer people admitted to hospitals and living in care homes—many with cognitive or sensory impairment, previous falls, impaired gait, muscle strength and balance problems, acute intercurrent illness, faints, or dizziness. We can't engineer falls, or the risk of them, from systems. Their occurrence doesn't automatically represent poor care. Hospitals or care homes are no more "places of safety" than being back at home.

Marketing materials from companies that manufacture sensors are not credible evidence. And coroners should have a basic grasp of research evidence before making controversial pronouncements.

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BMJ OPINION Julian Sheather

Turkey attacks its medical profession

It doesn't seem like much—hardly an offence. A national medical association calling attention to the public health consequences of armed conflict. Business as usual, surely? But not in Turkey. Not under president Recep Tayyip Erdoğan. In January, the Turkish Medical Association warned of the health consequences of the Syrian incursion, and now all 11 members of its council are under arrest.

Turkey is undergoing a political war of attrition. The government is degrading civil society. Tyranny cannot countenance opposition. Among its many evils is the demand for uniformity of thought. All thinking must be aligned to the mind of the potentate.

And when it comes to doctors, Erdoğan has previous form. Serdar Kuni, a member of the Human Rights Foundation of Turkey was convicted in 2017 for treating alleged members of Kurdish armed groups. Sebnem Korur Fincanci was charged with disseminating "terrorist propaganda" after guest editing a newspaper critical of the government. Laws have been passed criminalising medical treatment of protestors. Professional ethics, the moral independence of medicine—the requirement to treat solely on the basis of need—is being travestied.

Medicine gestures to the independent moral value of human life and dignity

Outside Turkey the medical profession is responding. The BMA has written to Erdoğan, as have the Norwegians and Germans. The World Medical Association is engaged.

In my years working in human rights, medics have often been under fire. Medicine gestures to the independent moral value of human life and dignity. It follows that doctors can be a thorn in the side of power. And power responds with violence.

Medicine is under threat in Turkey. But Turkey is not—yet—a totalitarian state. It is vital that we support independent voices, that we help civil society endure.

Julian Sheather, ethics manager, BMA
The views he expresses in his opinion pieces are his own

REUTERS

The Turkish Medical Association protests in Ankara last month after 11 senior members were detained

ANALYSIS

Call to sanction doctors who are complicit in torture

As CIA documents detail how medics were told to limit the clinical care of detainees, **Zackary Berger and colleagues** demand the world's health associations punish any members who cooperate

The UN Convention against Torture defines torture as "any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person" by someone acting in an official capacity for purposes such as obtaining a confession or punishing or intimidating that person.[1]

It is unethical for healthcare professionals to participate in torture, including any use of medical knowledge or skill to facilitate torture or allow it to continue, or to be present during torture.[2-7] Yet medical participation has taken place throughout the world and was a prominent feature of the US interrogation practice in military and Central Intelligence Agency (CIA) detention facilities in the years after the attacks of 11 September 2001.[8-11] Little attention has been paid, however, to how a regime of torture affects the ability of health professionals to meet their obligations regarding routine clinical care for detainees.

The 2016 release of previously classified portions of guidelines from the CIA regarding medical practice in its secret detention facilities sheds light on that question. These show that the CIA instructed healthcare professions to subordinate their fundamental ethical obligations regarding professional standards of care to further torturers' objectives.[12]

Medications were intentionally given at incorrect times explicitly to support the goal of torture

This document adds yet another disturbing element to our understanding of medical complicity in torture, suggesting a need to strengthen international and domestic ethical declarations to promote accountability for such complicity.[13] As an executive order by the US president outlines continued transfer of prisoners to Guantanamo Bay,[14] and the president has not ruled out the use of torture, a response becomes all the more urgent.

KEY MESSAGES

- Routine care at secret CIA interrogation sites was compromised to further the aims of torture
- Healthcare professionals participating in such compromised clinical care are complicit in torture
- Professional organisations should stipulate that members do not practise in an environment where torture is taking place unless they are working exclusively for the benefit of the patient
- Those who violate this obligation should be disciplined

Enhanced interrogation

From 2002, the CIA operated secret overseas prisons where terrorism suspects were detained and interrogated using "enhanced" methods such as extended sleep deprivation, confinement in a small box, exposure to cold water and air, stress positions, and waterboarding.

The CIA's Office of Medical Services issued guidelines in 2003 and 2004 for medical officers (physicians, physicians' assistants, and nurse practitioners). Medical officers were told that they were responsible for ensuring that enhanced interrogation methods did not result in serious or prolonged physical injury or death, although the limitations still permitted practices widely recognised as torture.[10 11] These guidelines were made publicly available in redacted form in 2009.

The 2016 release includes previously classified information related to medical monitoring and examinations that facilitated torture, such as evaluating prisoners for evidence of cardiopulmonary disease, assessing the gag reflex, and keeping prisoners nil by mouth before waterboarding. In addition, the release made it clear for the first time that CIA directions covered routine clinical care, showing that official policy limited clinical care for the sake of torture.

The guidelines stated that medical officers had an "obligation to maintain the highest professional and ethical standards and deliver appropriate care," and that they "should never perform or threaten to perform a medical procedure or intervention that is not medically indicated." Examples below, however, show how the guidelines directed clinicians to abrogate this ethical commitment.

Initial history and physical examination

Limitations imposed by the CIA on healthcare professionals' clinical decision making began early in the detention of terrorism suspects. For instance, the initial history and physical examination was expected to take no longer than 15 minutes and to focus only on recent trauma. At the same time, medical officers were required to conduct non-clinical

SHFWIRE

Activists from Code Pink and doctors demonstrate in 2013 against force feeding and torture of detainees in Guantanamo Bay

functions, including body cavity searches of the oral cavity, head, and area behind the scrotum and rectum.

Ongoing medical care and treatment

Once a suspect was detained, and after a comprehensive physical examination to "address in-depth any chronic or previous medical problems," the guidelines set out requirements for and limitations on ongoing medical care. They allowed for periodic checks and treatment for chronic conditions, but they also made clear that ongoing medical treatment "should not undermine the anxiety and dislocation that the various interrogation techniques are designed to foster" and "should not appear overly attentive." Furthermore, "time rigid administration of medications"—as might be required for treatment of thyroid disease, blood pressure, or many other chronic conditions—was to be avoided because such regular treatment might undermine one of the goals of interrogation: depriving detainees of a sense of time.

CIA physicians inflicted rectal rehydration on at least five detainees, as behaviour control and to force prisoners to yield information

Nutrition

Healthcare professionals were required to force feed or hydrate hunger strikers whose body mass index fell below certain thresholds. The guidelines advocated using rectal rehydration as a "first line intervention," although it is not a recognised medical procedure. It can be painful, given that, as the guidelines state, the tube needs to "be inserted deep enough to prevent escape of the infused fluid."[12]

The guidelines also encouraged deceiving detainees by hiding medications and nutritional supplements in food, presumably when a suspect refused medications. Force feeding is inhuman and degrading,[15] and over-riding an individual's free and informed decision to refuse medications violates respect for autonomy, one of the most fundamental principles of medical ethics.

Were the guidelines followed?

The extent to which the guidelines were implemented is not known because medical practices remain classified. There is, however, evidence that medical staff followed at least some of the practices set out in the guidelines even before they were written.

The executive summary of the US Senate intelligence select committee's report on CIA detention and interrogation practices shows, for example, that one detainee, Abu Zubaydah, had a bullet wound at the time of his capture that required surgery. Before his wound healed, he was "kept naked, fed a 'bare bones' liquid diet, and subjected to the non-stop use of the CIA's enhanced interrogation techniques," including waterboarding.[11 16] But medical staff provided "absolute minimum wound care (as evidenced by the steady deterioration of the wound)."[11] According to other CIA documents, interrogators consulted medical staff to devise a means to require Zubaydah to clean his own wound without disrupting the interrogation. Medics were also instructed to use goggles to conceal their faces, using hand gestures further to conceal their identities "to diminish [the detainee] as an individual."[11]

The Senate report also reveals that CIA physicians inflicted rectal rehydration on at least five detainees, using it as behaviour control and to force prisoners to yield information.[11]

Complicity

These and similar limitations on clinical care constitute a new dimension of complicity in torture. Medical care can be and is routinely limited for various reasons in ordinary settings. But the restrictions on care at the CIA detention facilities did not arise from physician or resource availability or legitimate medical considerations. Resources, such as staff and medications, were available; they were simply not provided and medications were intentionally given at incorrect times explicitly to support the goal of torture—that is, to "psychologically dislocate the detainee, maximize his feelings of vulnerability and helplessness, and

An Afghan detainee, Guantanamo Bay, 2002

reduce or eliminate his will to resist our efforts to obtain critical intelligence."[11]

Moreover, consent was dispensed with. Prisoners have a right to informed consent, although as in other circumstances, it can be over-ridden so long as procedural and substantive guidelines are followed. Evidence from the Senate Select Committee on Intelligence shows that consent was not part of clinical practice at the secret detention facilities. Ignoring prisoners' right to consent was instead part of the dehumanising process.

Dual loyalty—when a physician's professional obligations come into conflict with the needs of a third party such as an employer—exists in other settings, both military and civilian. Although the problems of dual loyalty in prison health are particularly challenging, at the secret detention facilities the guidelines ordered, and physicians appear to have demonstrated, loyalty only to the CIA. There is no evidence that either the agency or the medical staff gave more than lip service to the "highest professional and ethical standards" and "appropriate care."

Wider implications

The declassified guidelines show that healthcare professionals were directed to undermine their fundamental ethical obligations regarding clinical care. The guidelines applied only in CIA facilities, but analysis of them has global implications.

The World Medical Association's Declaration of Tokyo is a strong statement against medical participation in torture but needs to be more specific about clinical care in detention facilities. The declaration is clear that, "The physicians' fundamental role is to alleviate the distress of his or her fellow human beings, and no motive, whether personal, collective or political, shall prevail against this higher purpose."[2] It emphasises "clinical independence" and confidentiality, mandating that physicians not engage in the use of professional skills to facilitate or enable torture. Alterations in standard clinical care made to further torture's aims should be explicitly included within this definition of torture.

The failure to document and denounce alterations of standard clinical care to facilitate torture represents institutional complicity with torture

Furthermore, the Declaration of Tokyo states that physicians must also not "countenance" or "condone" torture, meaning they have a duty to report it, speak out, and protect the detainee. We agree with the 2007 statement of the WMA General Assembly that "the absence of documenting and denouncing such acts might be considered as a form of tolerance and of non-assistance to the victims." The failure to document and denounce alterations of standard clinical care to facilitate torture therefore represents institutional complicity with torture. These principles warrant reaffirmation in the professional and public sphere, including as a fundamental part of medical education.[17-19]

Our findings suggest the need for another step. The WMA should amend the Declaration of Tokyo to provide that health professionals should not practise in an environment where torture is taking place except for the benefit of the detainee. There is precedent for such a provision. The American Psychological Association had been complicit with the Department of Defence in permitting psychologists to participate in interrogation and had declined to initiate disciplinary action against psychologists alleged to have engaged in torture.[20] In response, its members passed a referendum that psychologists should not work in detention settings where violations of international law or the US Constitution take place, unless they are working directly for the detainee or for a third party seeking to protect their human rights. A similar approach could be incorporated into the Declaration of Tokyo.

Finally, professional associations of physicians, psychologists, psychiatrists, and other health professionals, as well as licensing authorities, should sanction health professionals who have participated in torture. Despite calls over the decade for punishment of physicians who participate in torture, cases of such punishment are rare.[17-22] When physicians have routinely violated their most basic commitment to patients' medical care, medical professional societies and licensing boards should impose disciplinary action, and as Miles and Freedman urge, the Declaration of Tokyo should make clear that such action should be possible indefinitely, so the passage of time does not provide protection.[17]

If physicians refuse to be at torture sites, and their professional associations and licensing boards punish collusion in torture as incompatible with professional practice, the abhorrent illegal and unethical practice of torture might be weakened. We need to remove the professional and institutional imprimatur that allows it to be carried out with impunity.

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OBITUARY

Ben Barres

Neuroscientist and fighter for diversity

Ben (Barbara) Barres (b 1954; q Dartmouth 1979), died from pancreatic cancer on 27 December 2017

Achieving excellence in a single aspect of life is difficult, doing so in two is phenomenal. Ben Barres was a phenomenon; the "godfather" who largely created the modern neurobiology specialty of glial research, and who was equally prominent for championing equality for minorities, particularly women, in the sciences.

Barres's unique journey began as one of fraternal twin girls in postwar middle class suburban New Jersey. She was named Barbara and grew up a tomboy who took an early interest in science and decided in eighth grade that she would go to the Massachusetts Institute of Technology.

MIT was a nearly all male place in those days. Barres was given early acceptance and a scholarship, but not an easy road towards graduation in 1976. "I was the only person in a large class of nearly all men to solve a hard maths problem, only to be told by the professor that my boyfriend must have solved it for me," Barres would later write.

Glial studies

Medical school at Dartmouth led to a residency in clinical neurology at Cornell, where the fascination with glia took hold. Barres felt the need for further study and turned to Harvard for a PhD in neurobiology, completed in 1990.

A postdoctoral fellowship took Barres to University College London, to work with Martin Raff on teasing apart the three classes of glial cells. After late nights in the laboratory, Barres would often fall asleep on the floor in Raff's small office. "Every morning when I arrived and opened the door, it would whack Barres—who eventually learned to sleep facing the opposite direction—in the head," Raff recalled fondly.

Barres moved to Stanford University as an assistant professor in 1993, with a meteoric rise to full professor in 2001. She was the first to grow glial cells in isolation, a cornerstone of the research area. Astrocytes had been dubbed the rubbish collectors of the brain, but she showed that they and microglia had essential roles in neuronal function by pruning away synaptic connections during early development. Early mentor Raff thinks that without the Barres laboratory, glial research would not exist as a specialty.

It was during this period that slow realisation prompted Barres to come to terms with being transgender. The catalyst was breast cancer and the psychological relief felt after having a double mastectomy. Reading of the experience of another female to male transgender person led her formally to transition to Ben in 1997.

Public advocacy

In his prominent example of public advocacy, Barres took on Harvard University president Larry Summers over comments that the paucity of women in the sciences was perhaps rooted in their "intrinsic aptitude." Barres countered that assertion in an extended 2006 commentary in *Nature*, which was laced with statistics and personal experience from presenting as both female and male.

"Shortly after I changed sex, a faculty member was heard to say, 'Ben Barres gave a great seminar today, but then his work is much better than his sister's,'" he wrote, illustrating the perception barrier that female researchers face. He added that one benefit of transitioning is that "I can even complete a whole sentence without being interrupted by a man."

And he included women in denying the existence of gender based bias, chastising those who succeed who too often "pull up the ladder behind them."

STANFORD UNIVERSITY

Barres showed he could be the best scientist in his specialty while going through gender transition

"People are still arguing over whether there are cognitive differences between men and women. If they exist, it's not clear they are innate, and if they are innate, it's not clear they are relevant," he told the *New York Times*.

"I have always admired that Barres would not let his personal life interfere with his science," said Eric Vilain, a developmental biologist who focuses on sex and the brain at Children's National Health System in Washington, DC. "He led by example: he showed that he could be the best scientist in his specialty while going through gender transition, and he did not try to 'explain' his transgenderism by changing specialty."

Barres spoke of the beauty of science and the curiosity that drove his work in an interview recorded last summer at Stanford. He wasn't afraid of dying, but he was wistful about having to shut down that curiosity, saying no to postdocs with fascinating ideas, and the end of new discoveries for him.

Barres leaves a brother, two sisters, and scores of adoring students who passed through his laboratory.

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BAWA-GARBA CASE

I've asked the GMC to investigate me

The High Court upheld the GMC's appeal in the case of Hadiza Bawa-Garba, who has now been struck off the medical register because her clinical errors were determined to amount to gross negligence manslaughter (This Week, 3 February).

I have made clinical errors including delayed diagnosis and errors in treatment. In some cases, my errors probably contributed to poor outcomes or death. So I have asked the GMC to investigate my clinical practice over the past 40 years to see whether I am fit to practise. Other doctors may feel obliged to do the same.

The High Court clearly agreed with the GMC that the three members of the fitness to practise panel had made an error in determining Bawa-Garba's sanction. Will the GMC be asking for removal of these people from the list of panel members, so that they cannot make a mistake at a future tribunal?

Peter T Wilmshurst, consultant cardiologist, Stoke-on-Trent

Cite this as: *BMJ* 2018;360:k549

Rough justice for doctors

We are in a rut with regulation, medical misadventure, and the criminal law, as shown by the case of Hadiza Bawa-Garba and Jack Adcock (This Week, 3 February). The GMC seemingly regards its duty as ensuring that public confidence in doctors is maintained. But surely explaining that robust processes are in place, that risk management is more evolved in the UK than elsewhere, and that reflection forms an integral part of our practice would be better?

We all make mistakes, fortunately very rarely with catastrophic consequences. But the logical conclusion of the Bawa-Garba case is that a series of errors—none in themselves critical—that lead to death or serious injury might merit a doctor being subject to the criminal justice system to maintain public confidence as an end in itself. That sounds like pretty rough justice to me, and I'm far from sure that it will improve patient safety.

Christoph Lees, consultant in fetal maternal medicine, London

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LETTER OF THE WEEK

Treating staff in the NHS as people

The NHS is about people, for people, by people. Responses to rising patient demand, financial constraints, and political dogma may be well intended and focus on patient need, but they fail to respect the human nature of the professionals on whom we rely to deliver care.

Recent articles in *The BMJ* show increasing discontent about working in the NHS (This Week, 6 January). Fewer foundation trainees than ever seek established training posts, and evidence shows burnout in this group. More doctors of both genders seek part time work to enable a work-life balance. Senior doctors retire early to avoid pressures and financial penalties on their pensions resulting from continued employment. Brexit and visa regulations limit staffing possibilities for employers. Locum appointments are restricted by cost savings, which increases rota gaps and hours of work, and doctors aren't being asked why they prefer locum posts to more secure positions.

Our research shows that working conditions are the main driver in career choice. By working conditions, we mean having predictable and staffed rotas, feeling part of a team, and being valued. Plenty of evidence from other industries shows that paying attention to employees' wellbeing reaps dividends in attendance, productivity, and job satisfaction.

We urge policy makers to look carefully at the people who staff the NHS and to make sure they are as well looked after as the population they serve.

Peter W Johnston, consultant pathologist, Aberdeen
Jennifer Cleland, John Simpson chair of medical education research, Aberdeen

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THUNDERSTORM ASTHMA

Controlling (deadly) grass pollen allergy

Andrew et al examine the ambulance responses in the thunderstorm asthma event in Melbourne in 2016 (Natural Phenomena, 16-30 December). Beyond emergency services, we need public health responses, including forecasting and control of known asthma.

Further proactive measures to identify and protect susceptible people are critical. Seasonal allergic rhinitis from grass pollen allergy was almost universal among affected patients and is the most sensitive marker of risk.

Risk may be further stratified using the degree of sensitisation to grass pollen, measured by wheal size and specific IgE concentrations, as well as airway inflammation.

Under the weather conditions of epidemic thunderstorm asthma, grass pollen grains rupture to release ryegrass group 5 allergen. Measurement of specific IgE to locally relevant pollen allergen components, including ryegrass group 5 allergen, could predict manifestation and severity of thunderstorm asthma.

We should stop considering treatment for allergic rhinitis optional; the condition is deadly.

Janet M Davies, assistant director, Brisbane
Francis Thien, director of respiratory medicine, Melbourne
Mark Hew, head of allergy, asthma, and clinical immunology, Melbourne

Cite this as: *BMJ* 2018;360:k432

SCIENCE BEHIND "MAN FLU"

Taking it like a man

Sue says that men might suffer more than women in response to the same microbial challenge (All Creatures Great and Small, 16-30 December).

We induced experimental endotoxaemia—a model of system inflammation typically resulting in flu-like symptoms—in 30 healthy volunteers (15 men, 15 women). We found that women mount a more pronounced pro-inflammatory immune response than men. By contrast, the vascular reactivity to norepinephrine was attenuated during endotoxaemia in men but was not significantly influenced in females.

So the innate immune response may be less pronounced in men, but the clinical consequences

may be more severe. Surprisingly, the severity of perceived symptoms was similar.

So yes, men complain when feeling sick, just like women do. But in our controlled human in vivo setting, men did not complain more, even though end organ dysfunction was more pronounced. Clearly, we do not moan about it, we just take it like a man.

Lucas T van Eijk, resident anaesthesiologist, Nijmegen
Peter Pickkers, professor of experimental intensive care medicine, Nijmegen

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Man flu is related to health communication

We think that man flu is more likely due to men communicating their symptoms differently from women, rather than having different immune functioning (All Creatures Great and Small, 16-30 December).

In a study of 1700 people with the common cold, men over-rated their symptoms compared with a clinician's judgment more often than did women (20% *v* 14%). But we don't know if this was due to men being less tolerant of sickness symptoms, more likely to complain about them, or whether the clinicians were more likely to underestimate symptoms in men.

We studied an experimental model of systemic inflammation and flu-like symptoms in healthy people. Men and women showed similar symptomatology, and they moaned and complained equally. But sick men, not women, increased their frequency of sighs and deep breaths.

The concept of man flu should be further scrutinised in terms of sex differences in non-verbal communication.

John Axelsson, professor, Stockholm
Julie Lasselin, researcher, Stockholm
Mats Lekander, professor, Stockholm

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Try rephrasing the question

I enjoyed Sue's investigations into the potential physiological basis of "man flu," particularly the fairly good evidence of sex differences in response to rhinoviruses (All Creatures Great and Small, 16-30 December). Studies indicating that premenopausal women may enjoy more benefit than postmenopausal women and men of any age, are especially interesting.

Sue pondered the possible evolutionary purpose for men having worse symptoms from the same viral infections and struggled to come up with any credible theories. When I was at university and struggling with a tricky assignment, my tutor told me to try rephrasing the question and thinking about it another way.

And so I humbly submit my own rephrasing of the question that seems to have stumped researchers so far: "What evolutionary purpose could there be for women of child bearing age having fewer symptoms and better survival rates from the same viral infections?"

What a mystery!

Catherine M Morgan, senior respiratory physiologist, Hereford

Cite this as: *BMJ* 2018;360:k455

PRIDE BEFORE A FALL?

Does pride come before the denial of a fall?

I am loath to respond in a serious tone to a Christmas paper, but the study of whether pride comes before a fall may contain a hidden wisdom (Time and Place, 16-30 December). Older adults with higher levels of self reported pride may have the same rate of falls but are less likely to report them.

Previous work has shown that older adults do not respond positively to the word "falls," think that interventions to prevent falls are better for others than for themselves, and rarely start conversations with health professionals about falls. Their self esteem and sense of independence may be bound up with other people not thinking of them as "fallers" who are in need of help.

Consequently, people with high levels of self reported pride may be under-represented in datasets of self reported falls and may be less likely to seek assistance.

Terry P Haines, head of school, Frankston, Australia

Cite this as: *BMJ* 2018;360:k438

PEPPA PIG ON HEALTHCARE

A helpful portrayal of visiting the doctor

Your article about Peppa Pig and primary care resources did exactly what a good Christmas article in *The BMJ* should: it made me smile, and then it made me think (All Creatures Great and Small, 16-30 December).

Peppa has a history of teaching children controversial lessons. An episode entitled *Mr Skinny Legs* that suggested spiders are not dangerous was recently pulled from TV schedules in Australia, home to many lethal arachnids.

The medical message that my kids have taken from Peppa Pig is that visiting the doctor is a non-threatening experience, comprising a brief examination and medicine that can make you better. This may be a sanitised version of the truth, but it is arguably helpful for a sick child.

As for the parents deciding if their children need to use primary care resources, one hopes that they don't base their decisions on the actions of an animated talking pig.

William M Stern, neurology specialist registrar, London

Cite this as: *BMJ* 2018;360:k480

RICHARD H SMITH

Teaching toddlers how healthcare works

Bell's paper on Peppa Pig is amusing and deep (All Creatures Great and Small, 16-30 December). An episode of *Curious George*, where he is admitted to hospital, shows how healthcare can be explained to toddlers without resorting to magic or sugar coated scenarios.

After swallowing a jigsaw piece, George is admitted to hospital for gastroscopy. He shares a room with Dave, who's getting a blood transfusion; Steve, who fractured his leg; and Betsy, who is sad and doesn't smile anymore.

When George recovers from anaesthesia, he steals a wheelchair and crashes into the lunch carts that had been brought to celebrate a visit from the mayor. Betsy bursts into laughter, and the mayor praises George for curing her.

This shows that you can explain to young children what hospitals are, what doctors and nurses do, and even what serious diseases are in a way that is both realistic and amusing.

Luca Bartolini, child neurologist, Bethesda

Cite this as: *BMJ* 2018;360:k487

LATEST PODCAST

Homelessness and public health

"We must not get to the stage of thinking that homelessness is normal."

In our latest podcast Danny Dorling, Halford Mackinder professor of geography at the University of Oxford, joins us to explain why homelessness is on the rise and what steps need to be taken to tackle the epidemic.

Listen to the podcast at http://bit.ly/homelessness_dorling

FROM THE ARCHIVE

The march to freedom

Tomorrow marks 28 years since Nelson Mandela was released from prison in South Africa after 27 years. Apartheid laws began to be dismantled in the period that followed, and in June that year *The BMJ* reported an end to apartheid in government hospitals in South Africa (*BMJ* 1990;300:1419).

"The South African government has announced that from now on every bed in the 240 hospitals under its jurisdiction will be open to all South Africans regardless of race. Another 44 whites only hospitals under separate administration are expected to follow suit.

"Announcing the government's decision, Dr Rina Venter, South Africa's health minister, said that national health policy was being formulated that would ensure that hospitals were used in the most efficient and economical way. She said that that if three hospital beds were needed for every 1000 people then South Africa had surplus of 11 700 beds for whites and shortage of 7000 beds for blacks."

Readers' responses to Bawa-Garba

In last week's issue we carried articles on the erasure of Hadiza Bawa-Garba, a trainee paediatrician, from the UK medical register (see most read online). Many readers have posted rapid responses with their reactions to this news and its implications.

"This is not a well balanced decision with an eye for patient care [and] safety long term. This is public and political appeasement."
–Vasudha Iyengar, gynaecologist

"I am sure I am not the only consultant who has had numerous junior doctors approach them [about] their concerns about staffing levels."
–Akif Gani, consultant geriatrician and stroke physician

"I love the NHS and will defend the job it does with my last breath, but it is broken, as are many of its staff. At the end of the day, we're just people trying to do the best job we can and do right by our patients and we want to feel protected in that fact."
–Natalie J Gaskell, SpR in geriatric and general internal medicine

"The public need to have confidence in the medical profession, which would be undermined if the General Medical Council did not permanently remove from the register doctors convicted of the most serious criminal offences . . . However, the public, and doctors, also need to have confidence in the criminal justice system. At present we do not."
–Jim G Thornton, professor of obstetrics and gynaecology, Christoph Lees, Susan Bewley

MOST READ ONLINE

Surgeon whose manslaughter conviction was quashed faces GMC hearing
BMJ 2018;360:k419

Back to blame: the Bawa-Garba case and the patient safety agenda
BMJ 2017;359:j5534

Paediatrician convicted of manslaughter must be erased from register, rules High Court
BMJ 2018;360:k417

Bawa-Garba case has left profession shaken and stirred
BMJ 2018;360:k456

Expert urges doctors to report themselves to GMC
BMJ 2018;360:k481