this week

MRI ACCESS page 214 • **GPs' MENTAL HEALTH** page 212 • **STOP SMOKING CUTS** page 216

DAN KITWOOD/GETTY IMAGES

Youth campaign group, Our Future, Our Choice, protests against a "no-deal" Brexit outside the Department of Health and Social Care, London, last week

Hancock: "Don't stockpile drugs"

The health secretary for England has warned GPs and hospitals not to stockpile drugs or write longer prescriptions for patients in the weeks leading up to Brexit.

In a letter to GPs, NHS organisations, community pharmacies, and other service providers, Matt Hancock said local stockpiling is unnecessary because the government has developed plans to ensure continuity of supply if the UK leaves the EU next March with no deal agreed.

Drug companies will be asked to ensure they have an additional six weeks' supply of medicines on top of normal stock levels, "in case imports from the EU are affected." Separate arrangements will be made for the air transportation of medicines with short shelf lives, such as medical radioisotopes.

Hancock said, "Local stockpiling is not necessary and any over-ordering of medicines will be investigated and followed up with the relevant chief or responsible pharmacist directly."

The letter came as the government published 25 papers on the potential consequences of a "no deal" Brexit, although it emphasised that it is "confident" it will reach a deal. Five of the papers focus specifically on the regulation of medicines and medical equipment. The documents say that, on 29 March, all medicines authorised by the EU will automatically receive UK marketing authorisation through a conversion process known as "grandfathering."

Mike Thompson, chief executive of the Association of the British Pharmaceutical Industry, said, "By agreeing to recognise and use medicines and vaccines licensed and manufactured in the EU, the UK government has taken an important step to protect patients. We urge the EU Commission to do the same."

As an example of how far EU regulations reach, under a "no deal" scenario the UK would have to introduce new health warnings on cigarette packets, as the copyright for the existing picture library is owned by the European Commission.

Chaand Nagpaul, BMA council chair, said, "Brexit will have a catastrophic impact for patients, the health workforce, services, and the nation's health." He added that greater clarity was needed. "Having two regulatory systems for medicines, for example, could lead to delayed access to new medicines and medical devices in the long term for patients in the UK."

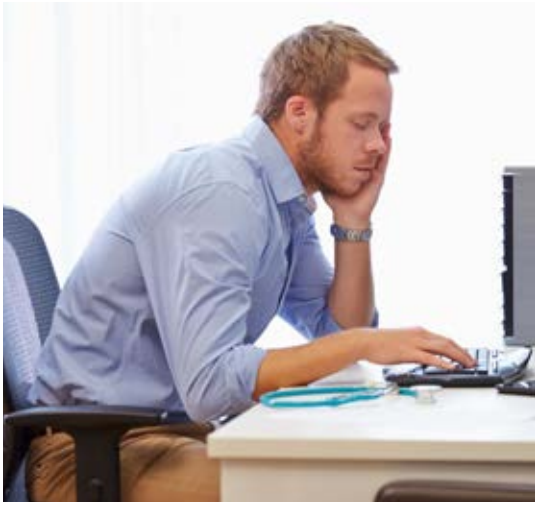
Ingrid Torjesen, London

Cite this as: *BMJ* 2018;362:k3644

LATEST ONLINE

- Repeated thyroid function testing in euthyroid older people should be avoided, study finds
- GMC chief faces calls to step down over Bawa-Garba case
- Undiagnosed Chagas disease is causing sudden cardiac deaths, doctors warn

SEVEN DAYS IN



Two in five GPs have had mental health issues

Around 40% of GPs in England and Wales have experienced conditions such as depression, anxiety, and post-traumatic stress disorder, a survey has found. In its online survey of 1066 GPs, the mental health charity Mind found that many GPs with such problems would not consider turning to colleagues for support.

Of those who responded, 84% (843) said that they would seek support from friends and family, while 77% would speak to their own GP. Just under half (45%) would seek support from colleagues, while just 3% said they would turn to the GMC.

Mind called on the NHS to do more to tackle work related causes of poor mental health, such as excessive workloads and long hours. It said clinical commissioning groups and general practices should ensure the whole primary care workforce—including managers, receptionists, and nurses—could access appropriate support.

Krishna Kasaraneni, the BMA's lead on the GP workforce, said that a properly funded universal occupational health service was needed. "After all, no one wants to be treated by a sick doctor, and strains on clinicians' mental health will only lead to more turning away from the profession," he said.

Abi Rimmer, *The BMJ* Cite this as: *BMJ* 2018;362:k3638

Air pollution

Particulates reduce life expectancy

Nitrogen dioxide (NO_2) and fine particulate matter ($PM_{2.5}$) may claim 36 000 lives a year in the UK, the Committee on the Medical Effects of Air Pollutants estimated. In response to a request from the government, the committee estimated that a cut in all traffic related pollutants consistent with a sustained 1 microgram/m^3 reduction in NO_2 could save 1.6 million life years over the next 106 years and increase life expectancy at birth by around eight days.

Trump's energy reforms "risk public health"

The American Lung Association (ALA) joined environmental groups in condemning the Trump administration's Affordable Clean Energy rule, a proposed replacement for President Obama's Clean Power Plan. By slowing the closure of coal burning power plants, the estimates from the Environmental Protection Agency (EPA) show that the rule would cause an extra 470-1400 premature deaths from particulate pollution each year by 2030. Trump and the acting EPA administrator, Andrew Wheeler (below), were abandoning much needed public health safeguards, the ALA said, "placing the health of all Americans at risk."

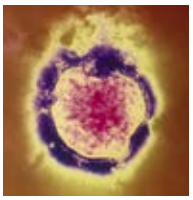
Legal news

Doctors can extract sperm from unconscious man

A High Court judge ruled that doctors can extract sperm from an unconscious man with a catastrophic brain injury, to store and use it to try to impregnate his widow after his death. Mrs Justice Knowles said the move would be in the best interests of the man, who was injured in a road collision on 5 July. The Human Fertilisation and Embryology Act 1990 states that a man's signed consent is required to store and use his sperm. But the Mental Capacity Act 2005 allows the court to decide on behalf of a person who lacks capacity.

Price campaign group can appeal case

The campaign group *999 Call for the NHS* can appeal a High Court ruling stating that the government's decision to create accountable care organisations in the NHS was lawful. Lady Justice Arden remarked, "A key question of statutory interpretation on this appeal . . . is whether the judge was right to hold that section 115 of the Health and Social Care Act 2012 does not require 'visible prices fixed in advance for each individual treatment episode' . . . This is clearly an arguable question of law. Therefore I give permission to appeal on all grounds."



Measles

Students are urged to check vaccination status

University students should check with their general practice that they are up to date with their MenACWY vaccine and the measles (above), mumps, and rubella vaccine, Public Health England said. From 1 January to 13 August 2018 some 828 measles cases were confirmed in England, with hotspots in London (291 cases), the south east (169), the south west (138), the West Midlands, (85) and Yorkshire and Humberside (80). Around Europe over 41 000 cases of measles were recorded in the first six months of 2018 and at least 37 deaths occurred, said the World Health Organization.

Public health

No level of alcohol is safe, study suggests

Alcohol use was the leading risk factor for premature death and disability worldwide in people aged 15-49 in 2016, a major observational study in the *Lancet* found. The Global Burden of Disease study estimated levels of alcohol use and its health effects in 195 countries from 1990 to 2016. The authors suggested that no level of alcohol was safe, as any benefits are outweighed by its adverse effects on other aspects of health, particularly cancers (see p 241).

Prostate enlargement

NICE approves water vapour ablation

Men with symptoms caused by benign prostatic hyperplasia have access to a new NICE approved treatment. Transurethral water vapour ablation delivers steam for 8-10 seconds into the prostate through a retractable needle. The needle is retracted and repositioned several times until the desired amount of tissue is removed. Men may be able to have the procedure as day cases, and it may cause less sexual dysfunction than other operations, said NICE.

MEDICINE

Respiratory syndrome

Liverpool hospital treats patient with MERS

Royal Liverpool University Hospital is treating a patient with the potentially deadly virus that causes Middle East respiratory syndrome (MERS), Public Health England said. The patient, a resident of the Middle East, is believed to have been infected there and was initially admitted to a hospital in Leeds before being transferred to Liverpool. People who may have been in close contact with the patient, including passengers on the same flight, will be contacted so that they can be monitored.

International news

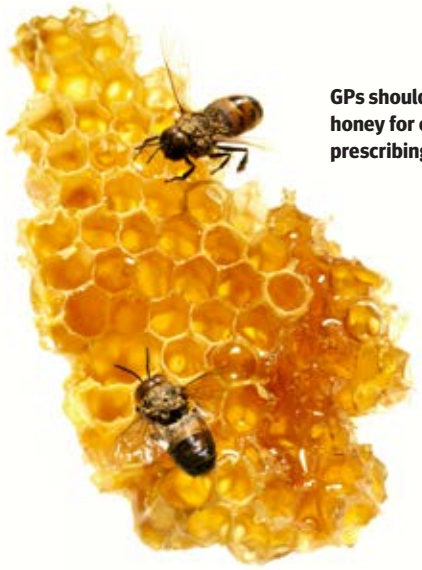
Saudi trainees win reprieve to stay in Canada

Nearly 1000 Saudi junior doctors training in Canada have been granted three extra weeks in the country, after Saudi Arabia relented slightly on its demand that they leave by the end of August. The kingdom has demanded the return of all Saudi students, in retaliation for comments made by Canada's foreign minister in support of women's rights activists arrested in Saudi Arabia.

Activism

Diesel protesters set up "sick bays" outside VW

Doctors and campaigners erected "sick bays" outside Volkswagen's Milton Keynes headquarters (below) to highlight the health dangers of diesel vehicles. Organiser Greenpeace said VW makes more diesel cars than any other UK car maker and urged it to switch to electric vehicles.



GPs should recommended honey for coughs instead of prescribing antibiotics

General practice

Honey and OTC remedies should precede antibiotics

Antibiotics make little difference to cough symptoms, NICE said. Instead, it advises GPs to recommend honey or over-the-counter cough medicines containing pelargonium, guaifenesin, or dextromethorphan, which it says have evidence of benefit. It is important for healthcare professionals to explain clearly the reasons for not giving an antibiotic and to give appropriate self care advice to the patient, says draft guidance on antimicrobial prescribing.

Full time GPs fall by 500 in three months

The total number of full time equivalent GPs in England fell by 523 over three months this year, from 33 686 in March to 33 163 in June, NHS Digital found. Provisional data from June 2018 and final data from March showed that the total number of headcount GPs (full and part time) also fell by almost 500, from 41 848 to 41 360. The figures indicate that the government is struggling to meet its pledge to recruit 5000 more GPs by 2020.

Cite this as: *BMJ* 2018;362:k3651

GP FTEs

Only 22% of GP trainees intend to be working full time a year after they qualified, while 47% intend to work part time

[King's Fund survey of 729 GP trainees]

SIXTY SECONDS ON . . . GETTING TO KNOW YOU

THE SONG FROM THE KING AND I?

Don't worry, I'm not about to burst into song. But this is about getting to know you, getting to know all about you . . .

ALL RIGHT, DEBORAH KERR, WHAT ARE YOU TALKING ABOUT?

A "getting to know you" form introduced by consultants in the emergency departments of the Royal London Hospital. The forms ask trainees all about themselves, what skills they can bring to the department, and what they want to get out of their training.

SOUNDS A BIT FRIENDLY FOR US BRITS

The idea came from emergency medicine consultant Will Rush, who did his training in New Zealand. Rush, who is responsible for foundation year two trainees, said, "I just felt that getting to know them at the start of the run was a way to welcome them."

BUT DO WE REALLY NEED MORE FORMS?

Tessa Davis, a consultant in paediatric emergency medicine, said the form helps to identify any useful skills a trainee might have from the outset rather than discovering these things four months into a six month term.

SUCH AS?

Davis discovered one of her trainees used to be a paramedic. "Another has a PhD in genetic epidemiology," Rush added. "In terms of the research, having someone with a PhD will be very useful."

SO, IT BENEFITS THE DEPARTMENT, NOT TRAINEES?

Trainees feel someone cares, Davis said. And it doesn't just cover their work life, it also asks them for "non-medical" details. It also means that teaching can be tailored to trainees' wishes, she added.

AND I GUESS IT CAN HELP BREAK THE ICE?

It does! Rush said that consultants can (with trainees' permission) read the forms to find a common interest.

HAS ANYONE REBELLED?

Not everyone answers all the questions, and a few trainees have said that they felt awkward. "But that also tells you something that's useful to know," said Davis.

Abi Rimmer, *The BMJ*

Cite this as: *BMJ* 2018;362:k3574

Call to end the "scandal" of denying MRI scans to patients with cardiac devices

Patients fitted with a pacemaker or an implantable cardioverter defibrillator (ICD) are missing out on prompt diagnosis of a range of conditions because safety concerns are preventing them from having magnetic resonance imaging (MRI) scans, cardiologists and radiologists have warned.

Traditional contraindications

Only one in 50 patients with a cardiac device who need an MRI scan is currently given one, as pacemakers and ICDs have both traditionally been seen as contraindications.

But this assumption is no longer valid and needs to change, said a statement from the British Cardiovascular Society and the Clinical Imaging Board (the Society and College of Radiographers, the Institute of Physics and Engineering in Medicine, and the Royal College of Radiologists).

These patients "should no longer be disadvantaged and have the same access to MRI scanning in the NHS as everyone else," it said. The statement emphasised it was now industry standard for implantable cardiac devices to be "MRI conditional," meaning that more than 95% of devices currently implanted are safe to scan under certain conditions. Evidence has also shown that older "non-MRI conditional" devices can be scanned safely if predefined protocols are followed, it added.

James Moon, clinical director of imaging at Barts Heart Centre in London, said, "It's a medical scandal that these patients do not get their scans. One problem is patients have been told they can never have an MRI—advice that is now wrong.

"Thanks to extensive research, we now know we can scan almost all—over 99%—of them safely; there are just a few we cannot. Not having an MRI scan, for example if cancer or a stroke is suspected, is highly detrimental. We are working on that—but change is slow."

About 440 000 people in the UK have a pacemaker or ICD. An estimated 50 000 of these will need a scan each year, but currently only 1000 MRI scans a year are performed in this population.

MRI is given to only **1** in **50** patients with a cardiac device who need a scan

The statement described MRI as "an unmatched diagnostic test" that is used in diagnosis, treatment planning, and monitoring in a range of specialties including cancer, neurology, and cardiovascular and musculoskeletal disorders.

More complications

The colleges said, "The consequences of not undergoing MRI when indicated include late and mis-diagnosis, the use of other more invasive tests with less robust performance, more complications and more expense. Many treatments are precluded without MRI planning including neurosurgery and Cyberknife radiotherapy, potentially resulting in worse clinical outcomes for patients."

Charlotte Manisty, consultant cardiologist and service lead for cardiac device imaging at Barts Heart Centre, said barriers to scanning arose at many levels. "Doctors often fail to refer patients with devices because of outdated safety concerns, and many hospitals still refuse to scan them," she said.

"Our team at Barts is addressing this both

Ophthalmologist is struck off for "appalling behaviour"

ERKAN MUTLUKAN WAS FOUND TO BE RACIALLY ABUSIVE

A locum consultant ophthalmologist has been struck off the UK medical register for a "sustained and repeated pattern of appalling behaviour" that included calling locum agency staff "apes and primates" and slapping another doctor's dictaphone from his hand.

While working in four hospitals in England, Wales, and Scotland between 2013 and 2015, Erkan Mutlukan was also found to have been rude and aggressive to several patients.

On another occasion he was so aggressive with telephone operators at Betsi Cadwaladr University Health Board in Wales that they agreed to dial 999 if he came to the switchboard.

Intemperate

Mutlukan, who qualified in Turkey in 1986, gave oral evidence at the factfinding stage of the medical practitioners tribunal hearing. But now in the US, in the past two months he has communicated with the regulator and tribunal only through "intemperate correspondence," said the tribunal chair, Neil Dalton.

He accused many witnesses of bias, calling one patient "a xenophobic racist hateful Scottish woman" and her daughter "her truck driver racist xenophobic hateful daughter," as well as describing switchboard staff as "the three xenophobic and racist belligerent unhelpful phone operators and their equally corrupt supervisor." He also accused the clinical lead at the Royal Devon and Exeter Hospital of "malice and supremacist xenophobia."

But he provided no evidence in support of these claims, said Dalton. Rather, it was Mutlukan who had been racially abusive in tirades. In one email exchange with a locum agency he called staff "dishonest primates and apes" and told them to "keep your third world jungle you guys brought."

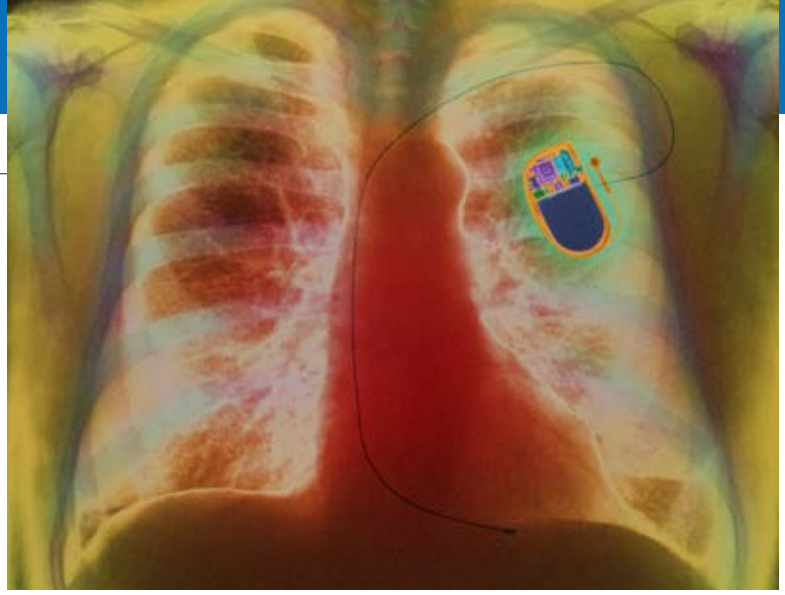
A former colleague told the tribunal that, while sharing an office, Mutlukan had become enraged at him for speaking into a dictaphone. He "came out with a torrent of abuse, swearing, and aggression. He caught me by my shirt near my neck and hit the dictaphone off my hands. He then tried to stamp on it."

Dalton said, "Dr Mutlukan has demonstrated a total lack of insight and potential for remediation, and has shown no remorse. Erasure is the only sufficient sanction."

Mutlukan will be erased from the register after 28 days unless he appeals.

Clare Dyer, *The BMJ*

Cite this as: *BMJ* 2018;362:k3593



locally and with a national campaign to raise awareness, develop services, and change policy.

"Change, however, requires cooperation at many levels, and this joint statement should mandate other hospitals to scan device patients, to reduce the unnecessary delays and suboptimal treatment that these patients currently often receive."

The statement called for local champions, new working practices, and partnerships—especially between cardiology and radiology and medical physics departments. "We as a community are capable of making this happen," it said. The Barts Heart Centre team won Diagnostic Team of the Year at the 2018 BMJ Awards in May for their work on scanning patients who have pacemakers.

"Doctors often fail to refer patients with devices because of outdated safety concerns, and many hospitals still refuse to scan them"

Zosia Kmietowicz, *The BMJ*

Cite this as: *BMJ* 2018;362:k3623

Bawa-Garba: doctors petition GMC

Nearly 700 doctors have signed a petition asking the GMC to find other means of paying Hadiza Bawa-Garba's legal costs rather than using their registration and licensing fees.

The GMC faces a large legal bill, still to be assessed, after losing the appeal brought by the trainee paediatrician against a High Court ruling striking her off the medical register after she was found guilty of gross negligence manslaughter in 2015 following the death of 6 year old Jack Adcock.

Hard pressed

A letter attached to the petition, which was signed by 667 doctors within 24 hours, said, "We do not believe these court costs should be paid by hard pressed and hard working doctors." More doctors are expected to sign the petition when it goes online at www.manslaughterandhealthcare.org.uk.

The doctors wrote, "A positive response to [the petition] would go some way to starting to repair the vital relationship of trust which appears to have broken down between the medical profession and the GMC in recent months."

The letter continues, "We fully support the fact that Dr Bawa-Garba should recoup all this money. However, we are firmly of the belief that this should not come from the GMC fees.

"We therefore request that the GMC find other ways to raise the money. This could include a comprehensive salary review of GMC executives and their common practice of providing private healthcare to their employees."

A GMC spokesperson said, "We will be responding in due course."

Clare Dyer, *The BMJ*

Cite this as: *BMJ* 2018;362:k3612

Prominent geneticist loses £3.5m grant after bullying accusations

The Wellcome Trust has withdrawn a £3.5m research grant from a scientist at the Institute of Cancer Research after allegations of bullying were made against her.

Nazneen Rahman (below) a genetic researcher at the institute, resigned after an investigation found that she had a case to answer. A law firm commissioned to investigate accusations from other staff members last November found sufficient evidence for the allegations to be reviewed by a disciplinary hearing.

Rahman announced her resignation before the hearing could take place, and the institute has released few details, even to the Wellcome Trust. It nevertheless said it had sufficient information to revoke the grant under an anti-bullying policy introduced in June.

"As we have been given information that raises serious concerns we have decided that her Wellcome grants will be terminated or transferred to other investigators," the trust said in a statement. "In addition, Professor Rahman will not be able to apply for funding from Wellcome for two years and she will not sit on any Wellcome advisory committees or boards for two years."

Rahman told *Nature* that she and her team plan to complete the Wellcome funded research before she quits in October. "We are working with ICR and Wellcome to ensure science and patients can benefit from our work," she said, declining to comment on the investigation.

Rahman, who qualified at Oxford, has worked as professor of human genetics at the institute and as head of the cancer genetics unit at the Royal Marsden Hospital. Her specialty is the genes that predispose people to cancers, including breast, ovarian, and childhood cancers.

This is the first time Wellcome's bullying and harassment policy has been implemented, and in light of this case the trust intends to make changes. Institutions in receipt of grants will have to tell it of any allegations when the institution decides to investigate them, not when it concludes that there is a case to answer.

In addition, they will be required not to enter into non-disclosure agreements with the accused person and to complete disciplinary procedures if warranted by an investigation.

In this case, the trust says, "It is disappointing the process was not seen through to its proper conclusion," while the institute said that it had shared as much information as it could, given data protection regulations. It admitted to *Nature* that it "could have done more to support those who came to us with concerns."

Nigel Hawkes, London

Cite this as: *BMJ* 2018;362:k3624

FIVE MINUTES WITH . . .

Scarlett McNally

The orthopaedic surgeon has been asked to find a new term to replace "junior doctor"

"The term 'junior doctor' is considered demeaning by doctors who have done a huge amount of training and have a lot of skills, and yet patients or relatives will say things such as, 'I've only seen the junior doctor.'

"Health Education England has invited me to lead some work on changing this term. We don't want doctors to think that we're focusing on this while ignoring more difficult issues; however, the terms we use are important, because how you name people changes how others value them.

"One of the difficulties we face is that Modernising Medical Careers, which reformed postgraduate medical education, produced a range of job titles that are still confusing for staff and patients. Another issue is that more than 30 000 doctors who aren't consultants are also not in a training programme.

"HOW YOU NAME PEOPLE CHANGES HOW OTHERS VALUE THEM"

"So, we have two questions: what to call individual doctors and what to call groups of doctors. We're likely to end up with two things: a basic term to replace 'junior doctor' and a set of terms that could be used within healthcare to indicate a doctor's skill level.

"Research has shown that the public wants to know who is a doctor, and who is in charge. Other staff need to know whether someone's an SHO or a registrar, for example, but no more detail than that. When you're going through training it's important to you and your supervisor whether you're an ST4 or an ST3, but to everyone else that level of detail isn't important.

"We have been conducting a survey asking whether people agree with our proposed terms and whether they would suggest others. We're also asking which terms they find demeaning, because we're trying to remove terms such as 'sub-consultant' or 'middle grade.'

"We're not going to make hard and fast rules that everybody has to stick to, but we're going to make some recommendations."

The survey is available until 6 September at: https://healtheducationyh.onlinesurveys.ac.uk/what-do-we-call-doctors-in-training-survey

Abi Rimmer, *The BMJ* Cite this as: *BMJ* 2018;362:k3522

New York medical school gives students free tuition

New York University has announced that it is to offer free tuition to all current and future medical students.

The medical school, ranked among the top 10 in the US, has an incoming class of 93 students and has 350 already enrolled. The free tuition was a surprise announcement at the annual "white coat ceremony," where students are presented with a white lab coat to mark the start of their medical training.

The school said it had made the decision to counteract the rising cost of medical education that is burdening students with heavy debts. The need for loans deters many promising students, including those from racial and ethnic minorities, from entering medicine, it said. It also encourages medical students to choose specialties with higher salaries rather than specialties such as primary care, paediatrics, and obstetrics and gynaecology.

Overwhelming debt

Robert L Grossman, dean of NYU's Langone Medical School, said, "A population as diverse as ours is best served by doctors from all walks of life, and aspiring physicians and surgeons should not be prevented from pursuing a career in medicine because of the prospect of overwhelming debt."

Kenneth G Langone, chair of the board of NYU Langone Health, said he hoped that, "by making medical school accessible to a broader range of applicants, we will be a catalyst for transforming medical education nationwide."

NEWS ANALYSIS

Councils are stubbing out stop smoking services

Cash strapped councils have slashed smoking cessation budgets in England again this year, *The BMJ* has found

The number of people using NHS smoking cessation services to help them quit dropped by 11% last year, the sixth year in a row that the level has fallen, figures published on 16 August showed.

These figures could be partly attributable to UK smoking rates being historically low at 16%, which compares favourably with many European neighbours. But rates are still high among disadvantaged groups: for example, around 40% of people with mental illness smoke. The rise of electronic cigarettes may also be a factor in the fall in service use.

On 17 August, a report by MPs called for a relaxation of regulations on e-cigarettes to encourage more people to stop smoking. But huge, austerity driven cuts to local government funding have undoubtedly been a leading cause of the drop in people accessing NHS smoking cessation services.

New data obtained by *The BMJ* under freedom of information laws suggest that NHS smoking cessation services are withering as councils are forced to redeploy funding to other areas.

Since being given responsibility for public health budgets in 2013 many local authorities have opted to disinvest in stop smoking services, which are not mandatory. Some are curtailing services by targeting only specific groups such as pregnant women.

Half of local authorities (56) that provided data reduced stop

NYU has already joined several other US medical schools in offering an accelerated three year medical curriculum instead of the usual four years, allowing doctors to begin practising sooner and with less debt. Free tuition will also tackle the problems of physician shortages and a lack of diversity, said Rafael Rivera, an associate dean.

No other US medical school offers free tuition to all students, although a few offer it to some students on the basis of merit or need. Tuition at NYU's medical school costs about $55 000 (£43 200) a year. The new guarantee removes this cost, but students will still have to pay for books, fees, and living expenses, which are estimated at $27 000 a year.

Some 62% of students in NYU's 2017 graduating class had debts, and the average debt was $184 000. The Association of American Medical Colleges reports that three quarters of graduates in 2017 had medical debt. It said that the median cost of medical education, including tuition and fees, was $59 600 a year at private medical schools, and the median debt among graduating students was $202 000.

"A population as diverse as ours is best served by doctors from all walks of life"

The free tuition programme will be paid for out of a $600m fund, of which the school has already raised more than $450m from around 2500 trustees, alumni, and other supporters. Langone, the founder of the Home Depot retail chain, and his wife, Elaine, have contributed $100m.

Janice Hopkins Tanne, New York

Cite this as: *BMJ* 2018;362:k3588

smoking budgets in 2018-19. This is a continuing trend, as the charities Cancer Research UK and Ash previously reported that 50% of English local authorities cut budgets in 2017, 59% in 2016, and 39% did so in 2015.

The BMJ's analysis—based on figures from 114 of England's 152 local authorities (a 75% response rate)—shows that the overall investment in NHS stop smoking services around England has fallen by 14% in the past three years, from £70.2m in 2016-17 to £60.3m in 2018-19.

Helen Walters, a member of the Faculty of Public Health's health improvement committee, said councils were in a "very, very difficult position" and called for a re-examination of local government funding across the board. She warned that, although the UK had been "a world leader" in tobacco control, there was no room for complacency. "Smoking is still the biggest cause of premature death and health inequalities," she said. "It's still very high in certain groups. We can't afford to take our foot off the pedal."

She added that smokers who wanted to quit were more likely to succeed using NHS services than on their own. "Smokers need as much help as they can get."

Vulnerable groups

Sohail Bhatti (left), consultant in public health and deputy chair (local government) of the BMA's public health medicine committee, acknowledged that stop smoking services were just "one bit of the armoury" in reducing smoking rates. But he too expressed concern that cuts were disproportionately affecting vulnerable groups.

"People make the case that we don't need these services because there is a decline [in smokers]," he said. "But my challenge to those areas that have decommissioned stop smoking services is: what are you doing about the poor, the destitute, and the disempowered? Otherwise, what we're doing is shifting the burden of ill health onto the poor disproportionately."

He said it was frustrating that the strong evidence base for the services was apparently being ignored. "In local government, everything has become politicised. High profile things are protected, and unfortunately there aren't voters crying out for a stop smoking service," he said.

Alex Bobak, a GP with a special interest in smoking cessation based in Wandsworth, south London, said the cuts were a "disaster" that had set back the UK's status as a world leader in smoking cessation. Regardless of local authority cuts, he said GPs had a responsibility to provide more support to patients. But he noted that current medical training in the evidence base of smoking cessation was poor and must be improved. "Many GPs believe that it is not within the remit of general practice, but it absolutely is," he said. "We need to step up to the plate in primary care."

Gareth Iacobucci, *The BMJ*

Cite this as: *BMJ* 2018;362:k3649

SHRINKING SERVICES

Some councils have scrapped services entirely. In London, Harrow decommissioned its stop smoking service in 2017, and Ealing is proposing to do the same from April 2019 as it seeks to save £395 000 a year. Elsewhere, Rotherham, Wolverhampton, and Reading have slashed their budgets by as much as 75%.

In Ealing's consultation on its plans, factors in its decision included the fall in the number of people quitting through NHS services and the emergence of e-cigarettes, together with its financial position.

It said, "Ongoing, deep cuts to government funding will mean the council has £143m less in government funding by 2021 than it did in 2010. This is equivalent to a 64% reduction. Any further continuation of the service from 1 April 2019 will cause a pressure on the public health grant, unless efficiencies can be found elsewhere in the service."

UK SMOKING rates are historically low at **16%**

DALILA MAHDAWI/MSF

THE BIG PICTURE

Stateless: the Rohingya refugees one year on

In the past year nearly a million people have fled Rakhine province in Myanmar for the relative safety of neighbouring Bangladesh. Around 900 000 of the refugees are now enduring cramped and unhygenic lives in camps, such as Balukhali, left, in Cox's Bazar. The town is now the world's largest refugee camp.

Since the exodus of the Rohingya people began, Médecins Sans Frontières (MSF) has treated 656 200 refugees in its clinics. Whereas once the majority of patients needed treatment for violence related injuries, now the charity's doctors are dealing largely with diarrhoeal disease, created and exacerbated by living conditions in the camps.

Pavlo Kolovos, MSF's head of mission in Bangladesh, said, "It is unacceptable that watery diarrhoea remains one of the biggest health issues we see in the camps. The infrastructure to meet even the most basic needs is still not in place."

Many of the refugees that MSF staff speak to are very anxious about the future. Made stateless by Myanmar and denied formal legal status by their host country, they are in legal limbo.

The charity is calling for a redoubling of efforts to find solutions to their plight. It warns that their statelessness must be tackled urgently to allow them access to healthcare, education, and protection. Kolovos said, "Hundreds of thousands of Rohingya have been displaced in Bangladesh and elsewhere for decades, and it may be decades until they can safely return to Myanmar, if ever.

"The scale and scope of the suffering merits a much more robust response—locally, regionally, and globally. Pressure must, meanwhile, continue to be exerted on the government of Myanmar."

A UN report has called for top military figures in Myanmar to be investigated for genocide and crimes against humanity. It is the UN's strongest condemnation so far of violence against Rohingya Muslims.

Declan C Murphy, *The BMJ*

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EDITORIAL

Prescribing biosimilars

Slow adoption is costly

Generic formulations of small molecules are usually as effective as originators, have similar harms, and are cheaper to prescribe. The same should be true of biosimilars, which are generic equivalents of originator biological medicines (biologics).

Biosimilars are biological medicines that are highly similar to other already approved drugs and are themselves approved according to the same standards of pharmaceutical quality, safety, and efficacy.[4] They are not necessarily identical. Consider, for example, monoclonal antibodies. Although a biosimilar is likely to preserve the primary amino acid sequence of the originator, differences in glycosylation, deamination, oxidation, or three dimensional structure can occur. These can affect interactions with target molecules, which could lead to differences in benefits, harms, or both, between biosimilars and the corresponding originators. This may be the case, for example, with epoetins.[5 6]

There should be no concerns about starting treatment with a licensed biosimilar rather than the originator

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Two problems

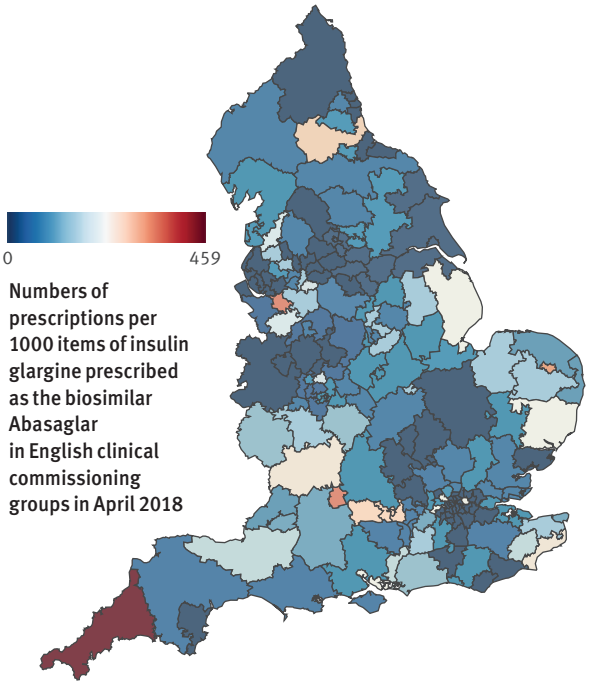
Clinicians face two problems: choosing between an originator or a biosimilar when starting therapy and whether to switch from one to the other during established therapy.

There are principles to ensure that biosimilars are similar enough,[7] and US and European regulators demand that biosimilars should be "highly similar to the reference medicinal product in physicochemical and biological terms."[8] Furthermore, "any observed differences have to be duly justified with regard to their potential impact on safety and efficacy." The principles are included in guidance from the US Food and Drug Administration,[9] and the UK's National Institute for Health and Care Excellence (NICE) has provisions for recommending biosimilars when appropriate.[10]

There is some reassuring evidence of equivalence. The World Health Organization plans to prequalify biosimilars for cancer therapy, giving them a global stamp of approval.[16] Comparability of quality, safety, and efficacy will make them eligible for procurement by UN agencies. This should increase assurance of equivalence.

Safety and efficacy

A systematic review of 58 studies, including 12 clinical trials, mostly involving infliximab or epoetins, suggested that the expected cost savings of switching outweighed the risks of harms.[18] A later review of 57 studies, covering a wider range of compounds (infliximab and epoetins among others) reported that safety and efficacy were mostly unchanged after switching.[19] However, the data were limited, and the authors commented that well powered and appropriately analysed clinical trials and pharmacovigilance studies, with long term follow-up and multiple switches between originators and biosimilars were needed.



Numbers of prescriptions per 1000 items of insulin glargine prescribed as the biosimilar Abasaglar in English clinical commissioning groups in April 2018

We sought evidence about UK prescribing of biosimilars in two publicly accessible sources: OpenPrescribing.net, which contains detailed current data on all prescribing in individual English general practices, and the NHS Medicines Optimisation Dashboard, which contains a limited number of prespecified measures at the individual NHS trust level.[20] Insulin glargine is commonly prescribed in primary care, and detailed data are available through OpenPrescribing.net. The originator, Lantus, still accounts for 90% of GP prescriptions (figure); the biosimilar Abasaglar accounts for around 60% of the new prescriptions for insulin glargine since it was licensed in September 2015. This suggests that 40% of new patients are still receiving the originator, which has an NHS indicative price that is 7% higher, and that switching is rare.

No other biosimilars are commonly prescribed in primary care, and hospital prescribing data are limited. Uptake of biosimilars by formularies of UK acute trusts and health boards has also been poor.[21]

Reasons for the poor uptake of biosimilars may include lack of familiarity, therapeutic inertia, concern about patient confusion over different brand names and different looking formulations, perceived lack of efficacy, and the nocebo effect.[22] This may have substantial cost implications, because prices are high and originators typically cost about 10% more than biosimilars.[23]

When a biosimilar has been licensed, there should be no concerns about starting treatment with it rather than the originator. And switching to a cheaper product in a patient who is already taking an originator can also be recommended when there is high quality evidence of equivalence of the benefits and harms, provided progress is carefully monitored.

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EDITORIAL

The resurgent influence of big formula

Education on infant feeding must not be left to industry

In May, word spread from the World Health Assembly of remarkable developments around an apparently non-controversial World Health Organization resolution to support breastfeeding. The US Trump administration had opposed the motion and threatened the proposer country, Ecuador, with a suspension of trade and military support.[1] Ultimately, the motion was proposed by Russia and accepted by the assembly, but the behaviour of the US caused ripples of surprise and concern throughout the global public health community.

Increased lobbying from infant formula manufacturers may underlie the US's new hard line approach.[2] The formula industry is anticipated to turn over about $70bn (£55bn) next year,[3] and $60m has been spent lobbying the US government alone in the past decade.[4] The formula industry has other links to US power—one of the companies tasked with separating children from immigrant parents at the US-Mexico border shares two board members with a formula company.[5 6]

The 2016 Lancet breastfeeding series estimated that over 820 000 babies' lives could be saved annually worldwide by increased breastfeeding rates.[7] Mothers benefit too—recent meta-analyses have shown marked risk reductions for triple negative breast cancer, ovarian cancer, and endometrial cancer in a duration dependent manner, along with apparent protection from a range of autoimmune and chronic diseases.[8 9] In the European Union, over 90% of infants receive formula milk at some stage in their first year.[7] The increasing use of infant formula in low and middle income countries has coincided with a slowing of the fall in infant and maternal mortality.[7] Events at the World Health Assembly suggest a new level of Trumpian disregard for maternal and infant wellbeing that should be resisted in the strongest terms.

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More than a food

Human milk is not simply a food. It is a vastly complex biofluid, containing thousands of components, many unique, individualised to each baby and environment.[10] Lactation developed as an evolutionary strategy before placentation, primarily to protect the immunocompromised neonate.[11]

Doctors have great potential to influence behaviour, and yet training in lactation support is almost entirely absent from undergraduate or postgraduate paediatric training programmes, and attitudes can be influenced by difficult personal experiences.[14]

Formula companies have invested heavily in medical, nursing, and dietetic education and online tools for parents,[15] including the dissemination of diagnostic criteria and tools for non-IgE mediated cow milk protein allergy or intolerance. Breastfeeding mothers who think their child has this allergy or intolerance may think that their own milk is harming their infant, with a consequent effect on breastfeeding and increased prescribing of specialised low allergy formula milks (which are processed to remove allergenic epitopes). Sales of these formulas exceeded £59.9m in 2016 in England and Wales alone.[16]

Leadership against industry educational initiatives has been hampered by the continued acceptance of formula sponsorship by professional bodies such as the Royal College of Paediatrics and Child Health and by close associations between industry and professional allergy, gastroenterology, and nutrition organisations, which WHO and the assembly continue to advocate against.[17]

Events at the World Health Assembly suggest a new level of Trumpian disregard for maternal and infant wellbeing

Causes for optimism

In the UK, the GP Infant Feeding Network (www.gpifn.org.uk) has provided evidence based unbiased information for doctors working in primary care since 2016, inspiring a recently formed Hospital Doctor Infant Feeding Network.

The Scottish government's 2017-18 breastfeeding programme highlighted the positive impact of fully adopting Unicef's evidence based UK Baby Friendly Initiative in each neonatal unit and maternity hospital[19]; six month breastfeeding rates have already improved by more than 10%,[20] and milk bank services are expanding. Appropriate use of screened donor milk in neonatal units, where it is primarily used to prevent necrotising enterocolitis in extreme preterm infants,[21] can also encourage breastfeeding[22 23]—could this be a tool to support more new mothers?

Doctors need to advocate breastfeeding, so another generation of mothers and babies are not failed.

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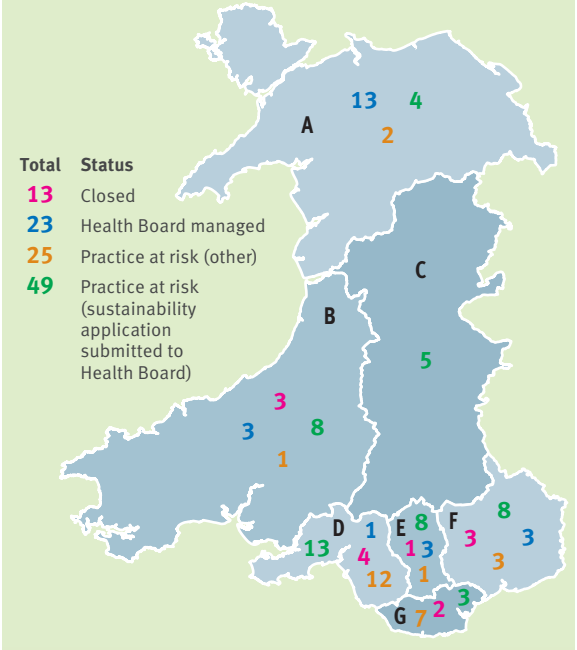
Doctor shortages in the town that inspired the NHS

The recruitment crisis in Aneurin Bevan's hometown and the surrounding south Wales area exemplifies the challenge faced across the country and the rest of the UK. **Jenny Sims** reports from Tredegar



Number of GP practices in Wales by health boards
- A Betsi Cadwaladr **152**
- B Hywel Dda **71**
- C Powys **28**
- D Abertawe Bro Morgannwg **93**
- E Cwm Taf **64**
- F Aneurin Bevan **107**
- G Cardiff and Vale **86**

Source BMA, data collected between October 2015 and April 2017

The birthplace of the NHS is generally acknowledged as Trafford General Hospital, Manchester, officially opened by Aneurin Bevan as Park Hospital on 5 July 1948. But 70 years on, it is still Bevan's home town of Tredegar, southeast Wales, that can be regarded as where the service was conceived.

Bevan, then health minister, openly boasted that he was basing his ideas for the NHS on the Tredegar Medical Society, which provided free healthcare in the town for iron, coal, and other industry workers, who paid a halfpenny a week into a "sick fund" to run it. "All I am doing is extending to the entire population of Britain the benefits we had in Tredegar for a generation or more. We are going to Tredegar-ise you," said Bevan, according to a quote etched on a plaque in the town.

That meant providing free services for all at the point of delivery, based on clinical need not ability to pay. But today, Tredegar, like many towns throughout the UK, is struggling to meet those needs and provide those services.

Major sustainability concerns

The population of around 14 000 is served by two general practices, one of which, the Tredegar Health Centre, was handed back to Aneurin Bevan University Health Board on 1 April because its two GPs want to retire.

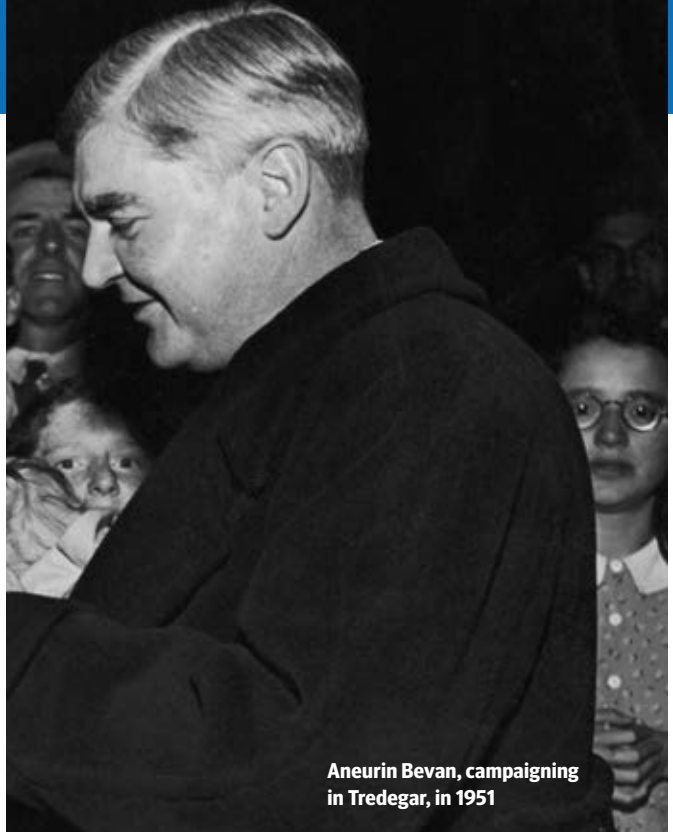
A report to the local council in October 2017 described Tredegar as an area with "high levels of deprivation, unhealthy lifestyles and associated ill health." It added, "The current GP premises are outdated and not fit for purpose. They do not facilitate multi-professional working, [are] lacking in expansion space and are not conducive to deliver modern primary care." It went on to warn there was a major concern about GP sustainability.

Gwent local medical committee chair, Deborah Waters, whose practice in Pontypool, less than 15 miles from Tredegar, has had a GP vacancy since last September, is blunt: "Primary care is in crisis because we can't recruit enough GPs or retain them. It's not just a problem for Tredegar and the other valley towns, but throughout Wales."

The BMA reports that 74 practices across Wales are in danger of closure because of recruitment challenges (figure, left). It's a message Waters has given to two Welsh health secretaries over recent years. "This one [Vaughan Gething] seems to be listening," she says.

Series of policies

Gething, who has been Welsh health secretary since 2016 and was made additionally responsible for social services in November last year, has



Aneurin Bevan, campaigning in Tredegar, in 1951

"We have friends and families here, people are friendly—and houses are cheaper"
Rebecca Nicholls

"I wanted to come back to my roots. There are lots of opportunities"
David Baker

"It's not just a problem for Tredegar and the other valley towns, but throughout Wales"
Deborah Waters

CASE STUDY: GLAN YR AFON GP PRACTICE, TREDEGAR

A four partner practice serving more than 6700 patients, Glan yr Afon is down to a partnership of two GPs, supported by locums and an out-of-hours service.

GP Krishan Syal celebrated his 70th birthday on 1 August, but he will not be retiring. Nor has he any hopes or plans of doing so any time soon as continuous and concerted efforts to recruit a new GP partner have failed.

"A GP's life wasn't easier. When I started I was on call 24 hours, seven days a week and bank holidays"
Krishan Syal

Having lured his younger partner, Georgy Mathews, 41, from a salaried job in Newport six years ago, Syal says: "I'm staying on now because of him. I don't want to let him down."

Originally from Punjab, Syal came to the UK for its job prospects. Trained in general medicine, then anaesthetics, he married, had a family, and moved from a hospital job in Wolverhampton to a general practice in the Rhondda valley in 1981, and then to the Tredegar partnership with another GP (since retired) in 2006.

"It was a good move, and there was no shortage of GPs," he recalls. Over time the town has slid into economic decline. But Syal doesn't look back through rose tinted glasses. "A GP's life wasn't easier. When I started I was on call 24 hours, seven days a week and bank holidays," he says.

Mathews, after qualifying in southern India, also came to the UK to gain further qualifications and experience. "My aim then was to go back," he says. But now he's settled in Cardiff with his family and understands the reluctance and apprehension of younger GPs who do not want to commute or commit to the workload, management, and financial risks involved in taking on a partnership.

Mathews dreams of Glan yr Afon becoming a training practice, which would stand a better chance of attracting future partners, he believes.

called for radical change in how both services are run to ensure the survival of the NHS in Wales. Recognition that this overhaul is necessary is evidenced by a series of Welsh Assembly policies and service reforms aimed at integrating health and social care, expanding medical education, and providing new funding for various services—all directed at improving people's health and wellbeing and easing doctor shortages.

These include the creation of Health Education and Improvement Wales, a single body to develop the Welsh healthcare workforce that comes into effect on 1 October, and a long term plan for health and social care, *A Healthier Wales*.

They build on other policies launched when Gething was deputy health secretary. For example, the 2014 primary care plan, which promoted physical, mental, and social wellbeing rather than the absence of ill health, and The Well-being of Future Generations (Wales) Act 2015, which requires public bodies to take an integrated and collaborative approach to find shared solutions, looking to the long term needs of future generations.

To help implement these policies, the country has been split into locality networks, with some GPs working collaboratively in 64 clusters with other health and care professionals to help them plan and deliver health services. In Blaenau Gwent county a health and wellbeing centre (an integrated health and social care model) is planned in Tredegar, into which the Tredegar Health Centre will relocate.

Many recruitment campaigns aimed at attracting doctors to Wales focus on lifestyle and quality of life, as well as career opportunities. Two Welsh doctors who have returned, partly for the quality of life, are David Baker, a consultant trauma and orthopaedic surgeon at Neville Hall Hospital, Gwent, and Rebecca Nicholls, who has just started a three year specialist training post in forensic psychiatry in Bridgend.

Baker, born in Tredegar, left at 18 for medical school in Leicester, did his registrar training in London, and worked "all over the place" in England. He says: "I wanted to come back to my roots and connections. People are friendly and welcoming, the countryside's great, and there are lots of opportunities." (His wife, a former teacher, is also from Wales.)

One reason Nicholls chose psychiatry over general practice was for the longer consultation times with patients. Born in Ebbw Vale (Bevan's parliamentary constituency, just over three miles from Tredegar), she admits one of her reasons for choosing to go to Bristol Medical School was: "I wanted to get out of Wales." But five years after returning to train and work in Wales, she and her husband have decided to stay. "We have friends and families here, people are friendly—and houses are cheaper."

For the future, there is consensus that the best chance of retaining doctors in Wales is for medical schools to train more students from Wales. To this end, efforts are being made to expand medical school intake and encourage applications from students from diverse and underprivileged backgrounds.

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ESSAY

Healthcare's creative future

Despite monitoring and accountability forging improvements over the past 30 years, healthcare remains beset with difficulties, so now, argues **Nick Black**, is the time to encourage connectedness among services—and embrace the innovation of staff

In 1988 Arnold Relman, editor of the *New England Journal of Medicine*, described how attempts to control the costs of the vast array of new diagnostics and treatments that had transformed medical care had had only limited success. He recognised how the quest in all countries for "an equitable health care system, of satisfactory quality, at a price we can afford" was having to contend with the countervailing interests of both the medical-industrial complex and unfettered professional autonomy.

Unfettered autonomy was apparent in the geographical variations in clinical practice being revealed, reflecting inconsistency in professional judgments. Relman suggested that a new, and much needed, era of healthcare was dawning, one that would tackle these challenges through rigorous assessment of clinical practice together with greater public accountability of doctors and services.

That era of assessment and accountability dominated the next 30 years. Evidence based medicine, clinical guidelines, clinical audit, surveys, and regulation have achieved much. The gains can be seen not only in improved outcomes and greater adherence to guidelines but also greater productivity. Underlying these has been considerable success in challenging medical paternalism and undue professional autonomy.

Yet despite all that has been achieved, health systems are still beset with problems. In England, regulators report the quality of many providers needs to improve, the productivity of services varies widely, administrative complexity bewilders patients and staff alike, lack of integration across sectors persists, staff are dispirited, and progress in developing patient centred care has been disappointing.

Why is this? The widely held view is insufficient funding. Although extra funds will no doubt provide some welcome relief, experience suggests any benefit will be short term, and propping up the existing system might further delay the need to tackle the underlying causes.

Instead, what is needed is a new era, one that adds to and supplements the three earlier ones, which were focused in the 1950s and 60s on technological developments, on cost containment in the 1970s and 80s, and on assessment and accountability since then. By themselves these approaches are no longer sufficient.

BIOGRAPHY

Nick Black has had a long career in health services research. He has been a strong advocate of assessment and accountability and contributed to its implementation. He chaired the Department of Health/NHS England national advisory group on clinical audit and inquiries for a decade and has served on several other national and international advisory bodies on quality assessment and improvement.

Solutions will come from the social entrepreneurs among the workforce, of which there are potentially many

Consider the shortcomings of the era that has dominated recent decades, assessment and accountability. The approach was based on the market oriented tools of new public management, which in turn depended on management solutions developed in the early 20th century to improve manufacturing.

These broke down production into the constituent parts and then sought to control variation by standardising processes. These processes were then centrally driven using incentives, targets, and sanctions, all of which was predicated on the assumption that patients (seen as customers) act rationally in their own interest in response to provider choice.

It is not surprising that application of this model to healthcare had unintended consequences. Regulation has become not only a bureaucratic burden but also an intellectual and emotional burden, at times causing hostility to inspectors. A low trust system has been created that discourages risk taking and threatens the job security of managers.

Staff initiative has been discouraged and their intrinsic motivation crowded out along with their commitment and solidarity to the system. Organisational silos have been perpetuated, limiting the development of links between organisational components. And finally, progress has been stymied in rebalancing healthcare towards patients' needs and priorities.

Health and care services must be able to adapt to complexity, uncertainty, and non-linearity. To achieve this, the new era needs to encompass two features that may seem incompatible: systems and creativity. We need to supplement existing achievements by introducing a greater recognition that health and care services are "human systems," in which the focus should be on the relations between constituent parts (primary care, hospitals, social care, and so on). At the same time we need to accommodate and support social entrepreneurs, the creative disruptors who will instigate innovation.

Given that systems thinking has been around for years, how can it be portrayed as something novel? In the past the approach focused on the organisational components of systems. Solutions were then sought through trying to get each part to do better. This inevitably perpetuated existing ways of delivering care and, when improvements didn't occur, the organisations were blamed (such as by sacking the manager). But health and care services are human or living systems in which the connections between components are fundamental to its success. These may be between departments, wards, hospitals, or whole sectors. A shift of focus away from organisations and to their interconnections requires exploiting the resourcefulness of staff and being truly responsive to the healthcare needs of patients and the social care of clients. It also needs the development of systems leaders, people who recognise that problems cannot be solved by single organisations but by building relationships based on listening without preconceptions.

Leaders must encourage and allow creativity to emerge by drawing together relevant people to tackle any given problem. This takes courage and insight because these people may not be in formal positions, such as medical directors, but be staff who in the past have had no voice. This is vital because creative solutions will reflect who is involved and the space they are afforded to think afresh.

Leaders of systems don't have to feel that they must solve problems themselves. The solutions will come from the social entrepreneurs among the workforce, of which there are potentially many. They are motivated by altruism (rather than profit making), with ideas that traditionally have had little opportunity to be realised. The system needs such entrepreneurs to create necessary disruption given the intrinsic intransigence to change.

The challenge is how to release the creativity that lies dormant within the system and then channel the best ideas

into practice. We need all involved in health and care services to "think like a system and act like an entrepreneur."

This may sound too demanding and unrealistically ambitious: but the era of systems and creativity has already dawned. Brilliant examples abound in many countries, not least in the NHS in England, where the essence of the Five Year Forward View strategy in 2014 and the emerging integrated care systems is a shift in emphasis towards focusing on the relation between component parts of the system and encouraging local creativity to transform services.

Denis O'Rourke is assistant director for integrated commissioning in mental health at Lambeth Clinical Commissioning Group in south London. He has brought together patients, carers, primary care, commissioners, hospitals, and social care to transform services. The Living Well Network they created has led to better patient experiences plus a 43% reduction in referrals to specialist care and less need for admission to residential care.

Meanwhile, in Frome, Wiltshire, the GP Helen Kingston and health trainer Jenny Hartnoll have brought together general practice, social services, charities, and the community hospital to develop the Compassionate Frome Project to address loneliness. This has been associated with better quality of life for patients and a 17% reduction in emergency admissions.

Reductions in the need for emergency hospital care have also been seen in Nottingham, where the introduction of a rapid response team for falls has reduced the number of elderly people transferred to hospital by paramedics by 44%, and in Gateshead where specialist community nursing for older people in a large general practice has reduced emergency admissions by 54%. Another large reduction of 36% has been achieved among care home residents in east London by improving GP support.

Local creativity can also be seen in hospitals. In Wrightington, Wigan, and Leigh Trust the incidence of severe acute kidney injury has fallen by 28% and mortality by 57% after the appointment of a specialist nurse, who raised awareness of the condition among ward staff.

Government must have the courage to welcome, support, and defend changes even if they result in greater variation

These are just a few examples. Much can be and is being learnt from other countries. "Shared dialysis," in which patients take greater control of their clinic treatment resulting in improvements in outcomes, efficiency, and patients' experience, was initiated in Sweden not by staff but by an enterprising patient. The approach is currently being piloted in England.

So is a radical new way of organising and managing district nursing, based on the Dutch experience with Buurtzorg, with benefits for patients and staff. And the carers of people with Parkinson's disease and other long term conditions could learn much from ParkinsonNet, an interactive website shared by patients and staff in the Netherlands that has shifted the focus from clinicians' to patients' concerns, halving the rate of hip fractures and the overall cost of care.

Like all healthcare systems, the NHS has relied heavily on national strategies and central mechanisms in its quest to achieve universal, high quality services that meet the needs and expectations of the public at a reasonable cost. Although there have been notable successes, it is not sufficient to rely principally on central guidance, rigorous assessment, and public accountability.

Inadvertently, this approach has tended to suppress and discourage one of the NHS's great assets, the creativity and commitment of its staff and patients. By releasing their energy and recognising the importance of the relations between organisational components, the health and care system can flourish. The changes needed, however, pose profound challenges for government, staff, and the public. As with any paradigm shift, people will find it difficult and even uncomfortable.

First, government and other national and regional organisations (commissioners, regulators, and so on) may struggle to accommodate the new era because central authorities will have to relinquish some control to enable local creativity to redesign local systems.

Second, after years of seeking consistency in service provision throughout the country, the new era will result in more not less diversity. That is inevitable if changes to improve care are going to emerge from local initiatives. Government must have the courage to welcome, support, and defend changes even if they result in greater variation between places. Government's concern must be with areas that are standing still rather than those creating increased variation.

Third, staff will face the challenge of adapting to a world in which the focus is on systems. That requires the ability to think across healthcare sectors and social care. Narrow sectarian interests must be relinquished. This is essential for those in formal managerial positions, but all staff need to orient towards the whole healthcare system and what is best for the public. In practice, staff may find this less challenging than managers.

And finally, the greatest challenge might be for the public. Long held and cherished visions of what healthcare looks like and how it functions—doctors, nurses, hospitals, general practices—will be challenged. Fear of loss of the familiar needs to be understood and tackled as part of the new era. Given that a feature of the new vision is greater involvement and engagement of patients and the public, from shaping services to self management of health conditions, responding to the public's concerns about emerging changes is vital.

Heralding the dawn of the era of assessment and accountability in the late 1980s, Relman warned, "No one should underestimate the size and difficulty of the task. However, the logical necessity of this new initiative seems clear." Over the past 30 years those difficulties have been overcome, resulting in many benefits. But it hasn't proved to be sufficient.

The same warning applies to the new era as does clarity about the need for it. The new era offers the opportunity to supplement past successes in ways that will reinvigorate services and ensure they meet the aspirations and needs of the public and of staff over the next few decades.

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