

# this week

**MINIMUM ALCOHOL PRICE** Page 465 • **ABORTION LAW NEEDS REFORM** Page 467



MARK THOMAS/SPL

## Anaesthetist workforce is in crisis

The rate at which consultant anaesthetists are joining the NHS workforce must double to meet growing demand and ensure that safe care of patients is maintained, the Royal College of Anaesthetists has said in a new report.

On 12 June the college published its *Medical Workforce Census Report 2015*,<sup>1</sup> in which it made stark warnings about gaps in rotas, vacancies, and the ageing workforce.

The college gathered data from every anaesthetic department across the UK and found that in 2015 there were 7422 consultants and 2033 staff and associate specialist (SAS) and trust grade doctors. The data showed that the total number of consultants rose by 8.4% between 2010 and 2015, from 6849 to 7439, giving an average increase of around 2.3% a year from 2007 to 2015.

The report's authors calculated that this rise was less than half that needed to maintain numbers of consultants at the levels required to deliver safe and effective healthcare as identified in a 2015 report by the Centre for Workforce Intelligence.<sup>2</sup> The centre said that with growing pressure on the NHS in England, there needed to be 11 800 full time doctors in anaesthesia and intensive care by 2033, but the college

predicted that there would be just 8000.

The census showed that gaps in doctors' rotas in half of anaesthetic departments in the UK had risen over the previous 12 months. Almost all (98%) the departments relied on internal locums, and 74% used external locums to cover staff shortages.

Across the UK 329 consultant posts (4.4% of the total) and 223 trust grade posts (11%) were vacant during 2015.

Liam Brennan, president of the Royal College of Anaesthetists, said, "These workforce shortcomings, combined with spiralling service pressures, suggest that we are heading for a 'perfect storm,' with implications for the welfare of both patients and clinicians."

Paul Spargo, lead author of the census report, said, "Not only will low staffing levels perpetuate rota gaps and prevent hospitals from meeting growing patient need but [they] will also adversely impact on the recruitment, training, wellbeing, and morale of all anaesthetists and ultimately compromise patient safety."

A spokesman for the Department of Health for England said that it did not recognise the college's figures.

Adrian O'Dowd, London

Cite this as: *BMJ* 2016;353:i3308

**Staff shortages and service pressure have implications for the welfare of patients and clinicians, said Liam Brennan, president of the Royal College of Anaesthetists**

### LATEST ONLINE

- GP struck off for making fake claims under Quality and Outcomes Framework
- US study adds to debate over whether e-cigarettes lead to smoking in young people
- Long acting opioids are linked to increased risk of death



# SEVEN DAYS IN



REX

## Cuts in health prevention budgets will hit NHS

The NHS in England can expect to feel the effects of cuts by local authorities to key public health and prevention services, NHS England's chief executive, Simon Stevens, has told MPs.

Stevens (left) said that when services for sexual health, drug or alcohol abuse, and smoking prevention diminished this would "show up as extra demand, in more expensive parts of the NHS, within 12 months."

He told the Commons health committee on 7 June that he was concerned about local authority cutbacks having an "impact on downstream demand."

Stevens said that there was a need to "up our game" on prevention, given that about 40% of the NHS's workload was related to modifiable health risk factors. He estimated that investment in public health would save the NHS up to £1bn in the next five years.

"We calculate that the NHS has saved £1.5bn as a result of a 15% reduction in salt in diet since 2001. Doing the same with sugar will produce the same kinds of benefits stretching out over the next 5, 10, or 15 years," Stevens told MPs.

The committee was examining how the public health system in England was working from 2013, after it moved responsibility from the NHS to local government.

Matthew Limb, London [Cite this as: BMJ 2016;353:i3236](#)

## Regulation

### Delayed ambulances at Portsmouth hospital put lives at risk



The Care Quality Commission rated Portsmouth Hospitals NHS Trust "inadequate" for urgent and emergency care and "requires improvement" for medical care at Queen Alexandra Hospital. Queues outside the hospital's emergency department meant that ambulances were delayed in getting to people involved in serious traffic crashes, inspectors found. The trust was told to ensure that patients are treated more quickly and to stop using the large multi-occupancy ambulance known as the "Jumbulance" (above) to hold patients waiting to enter the emergency department, except in major incidents.

## Research roundup

### Stem cell results for MS need confirmation

Clinical trials are needed to

confirm whether aggressive immunosuppression followed by stem cell transplantation helps patients with multiple sclerosis, after a study found that 23 of 24 patients had no further clinical relapses or new brain lesions over an average of seven years after treatment. Eight patients also showed improvements in disability, but one died from treatment complications. "Since this is an aggressive treatment, the potential benefits should be weighed against the risks of serious complications . . . and this treatment should only be offered in specialist centres experienced both in multiple

sclerosis treatment and stem cell therapy, or as part of a clinical trial," said Mark Freedman, lead author, from the University of Ottawa, Canada. (Full story doi:10.1136/bmj.i3269)

### Few patients report sleep disturbances from drugs

German researchers found "barely any link" between drugs that warn about potential sleep disturbances and what patients report. They collected data from 4221 people aged 45 to 75 and

examined whether their medicines led to early waking or to difficulties in falling asleep or staying asleep. Drugs labelled with warnings about sleep disturbance were "not a major risk factor for sleep disturbance in the general population," they found, even in people taking a number of such drugs, they reported in the *British Journal of Clinical Pharmacology*.

### Breast feeding may benefit heart in premature babies

Babies born prematurely have less reduction in heart volume as adults if they are fed exclusively breast milk than babies fed only formula, a study in *Pediatrics* found. In babies who

had mixed feeding, consuming more breast milk was linked to better heart structure and function as adults.

Adam Lewandowski, study author, from the Oxford Cardiovascular Clinical Research Facility, said, "Even the best baby formula lacks some of the growth factors, enzymes and antibodies that breast milk provides to developing babies." (Full story doi:10.1136/bmj.i3307)

## Obstetrics

### Birth incident reports must improve

Investigations into stillbirths, neonatal deaths, and severe brain injuries that occur at full term must improve, the Royal College of Obstetricians and Gynaecologists said. The college launched the Each Baby Counts initiative in 2014 to halve the number of such cases by 2020, and its first report found 921 such babies born in the UK in 2015. Of the 610 reports of such incidents 27% lacked information, and 39% included no action to improve care or made recommendations focused solely on individual actions. (Full story doi:10.1136/bmj.i3259)





# MEDICINE

## Overseas

### Olympic Games are likely to be free of Zika

Organisers of the 2016 Olympic Games in Brazil said that the chances of anyone becoming infected with the Zika virus during the competition were almost zero. The number of Zika cases in Rio de Janeiro has dropped sharply in recent weeks and will fall to almost none during the dry winter months of the Olympic and Paralympic Games in August and September, they said. No cases were reported during 44 test events for the games carried out from August 2014 to May this year including thousands of athletes, volunteers, and staff—even though many of the events took place



in Rio's wetter months, when mosquitoes are more prevalent than they will be during the games.

### Canada's assisted dying policy leaves doctors confused

Canadian doctors were left in legal limbo after the government missed a 6 June deadline to pass new laws legalising doctor assisted suicide. Since 7 June the criminal code prohibiting physician assisted dying has been lifted, but, because federal legislation has not been enacted, doctors are unsure whether they will face criminal prosecution if they help a patient to die. Cindy Forbes (right), president of the Canadian Medical Association, said that doctors "remain extremely uncomfortable with the legal limbo in which they have now been left," while patients "will be left to languish." (Full story doi:10.1136/bmj.i3273)



## Devolved nations

### Vacant consultant posts rise in Scotland

The BMA called for urgent action on consultant numbers in Scotland after figures showed 355.4 vacant posts in March 2016, 9.8% more than 324.8 in March 2015. The number of posts vacant for six months or more rose by 14.2% to 162 over the same period. Nikki Thompson, of BMA Scotland, said that the Scottish government must take action to value the consultants we have, and attract those others that patients and services desperately need." (Full story at <http://bit.ly/21jJOHJ>)

### Consent "deemed" for half of transplants in Wales

In the past six months, 32 of the 60 organs removed from donors in Wales were from 10 people who had not registered whether they wished to donate.

"Deemed consent" was introduced in December 2015, putting the onus on people to opt out of organ donation rather than opting in.

Cite this as: *BMJ* 2016;353:i3320



## DIET

57 out of 144 (44%)

countries surveyed for the Global Nutrition Report currently experience serious levels of both malnutrition and adult overweight and obesity



## SIXTY SECONDS ON... MINIMUM ALCOHOL PRICE



### IS IT FINAL ORDERS YET?

Nowhere near, in UK terms. In 2012 the coalition government pledged support for a minimum price for a unit of alcohol but shelved its plans in 2013, claiming that there was not enough evidence to proceed.<sup>1</sup> But Scotland did pass legislation to set a minimum unit price there, also in 2012.

### WHAT'S HAPPENED SINCE THEN?

Not much, apart from growth in lawyers' yacht and luxury holiday funds.

### HOW COME?

The drinks industry launched a legal challenge to the policy in the Scottish courts. The industry lost but took the case to the European Court of Justice. It's been bouncing back and forward ever since.

### SO CHEAP ALCOHOL IS STILL BEING SOLD IN SCOTLAND?

Absolutely. Alcohol Focus Scotland has found that the recommended weekly limit of 14 units can be bought for as little as £2.52.

### HOW WOULD THAT CHANGE UNDER MINIMUM PRICING?

Fourteen units of alcohol would cost at least £7 to buy, as every unit sold would have a minimum price of 50p.

### I'LL DRINK TO THAT—SOUNDS SENSIBLE

Not according to the drinks companies. They say it's likely to be ineffective in tackling alcohol abuse and will force responsible drinkers to pay more. They also say it would damage Scotland's successful whisky industry.

### WHAT'S THE LEGAL OPINION?

The European Court of Justice says that the policy may breach rules on free trade and has suggested that tax increases can be used to

increase alcohol prices. However, it has left it up to the Scottish courts to decide.

### WHAT HAPPENS NOW?

A two day hearing took place last week at the Court of Session in Edinburgh, and judges will deliver their ruling in the next few weeks.

### SO THE END IS ALMOST IN SIGHT?

Perhaps not: it could still end up in the UK Supreme Court for a final appeal.

Bryan Christie, Edinburgh

Cite this as: *BMJ* 2016;353:i3300

## GP STRUCK OFF FOR LYING TO POLICE IS ALLOWED BACK ON MEDICAL REGISTER

A South Yorkshire GP who was struck off in November 2009 for lying to police and to a coroner's inquest has been allowed back on the medical register after a fitness to practise tribunal found that he had made exceptional efforts at remediation.<sup>1</sup>

Nigel Palmer, 52, lied to cover up his failure to take action in the case of Eileen Gill, an 82 year old smoker known to be careless with matches, before she died in a fire at her home in September 2007.

### Daughter's concerns ignored

Her daughter had called Barnsley social services from her home in Spain that summer to express concern about the risk. Social services called Palmer's surgery to request a visit to Gill's home, but none had been made by a month later when a discarded match or cigarette set Gill's bed alight, killing her.

Palmer showed the police a practice message book that recorded no call from social services, but he concealed a second message book from which the page for the relevant date had been removed.

### Inquest halted

The inquest into Gill's death was halted when the second message book came to light and Palmer

### Palmer admitted the offence and received a nine month suspended prison sentence

was charged with committing an act intending to pervert the course of justice. He admitted the offence,

received a nine month suspended prison sentence, and was ordered to do 250 hours of unpaid community work.

### Dedication to restore trust

A Medical Practitioners Tribunal Service panel heard Palmer speak at length about his work since being struck off. He worked for the company responsible for drug and alcohol services in Barnsley and helped to establish a hospital drug and alcohol liaison team at Barnsley District General Hospital.

The tribunal chair, Carol-Anna Ryan-Palmer, said that the panel was impressed by Palmer's decision to stay and work in Barnsley and that he had "used every opportunity when encountering former patients to be open and honest and to apologise to them."

It is unusual for doctors who have been struck off to get back on the register. A GMC spokeswoman said that between 1 May 2011 and 3 May 2016 only eight doctors who were previously erased for disciplinary reasons were restored to the register.

Clare Dyer, *The BMJ* Cite this as: *BMJ* 2016;353:i3231



## NICE backs laser treatment for men with enlarged prostate

The National Institute for Health and Care Excellence (NICE) has recommended laser treatment for men with benign prostatic hyperplasia who are not at high risk of complications.

The medical technology guidance supports use of the GreenLight XPS

laser system in men who are not at increased risk of bleeding, whose prostates are smaller than 100 mL, and who do not have urinary retention. It says that not enough evidence exists to recommend laser treatment in high risk patients, but it calls on specialists to collect

## FIVE FACTS ABOUT CANCER SURVIVAL IN ENGLAND

What we learnt from last week's report from the Office for National Statistics and Public Health England on survival at one year from nine types of cancer

**1 BREAST CANCER** The proportion of women surviving a year after a diagnosis of breast cancer averaged 96% in 2012-14 across all ages and stages of cancer. The high proportion was probably due to screening and effective treatments. Women with stage I or II breast cancer had a one year survival rate similar to that of the general population. At stage IV one year survival was 63%.

**2 PROSTATE CANCER** Men with prostate cancer diagnosed at stage I, II, or III had a one year survival rate that was the same as in the general population. Overall one year survival was 96%.

**3 OVARIAN CANCER** One year survival among women with ovarian cancer was 71%, the second lowest rate among women after lung





Laser treatment will enable more men to have day surgery for BPH

information on outcomes if they do use the device in this patient group.

The guidance says that the laser treatment is at least as effective as transurethral resection of the prostate (TURP) but that it can be carried out as a day case procedure more often.

Benign prostatic hyperplasia affects around 60% of men aged 60 or over, and an estimated 13 600 men with enlarged prostates could benefit from laser treatment. NICE estimates a cost saving per patient

**Treating patients as day cases could save the NHS in England up to £3.2m a year**

of £60 and a potential yearly cost saving for the NHS in England of £2.3m to £3.2m, depending on the proportion of patients who could be treated as day cases.

GreenLight XPS uses a laser to vaporise excess prostate tissue, leaving a clear urethral channel. The console is usually provided at no cost to the NHS as part of a contractual arrangement with the company to buy a minimum number of laser fibres over a specified time period, at an average price of £550 a fibre.

The guidance committee considered that the evidence for GreenLight XPS allowing more procedures to be done on a day case basis was convincing and compelling. But it said that urological services would need to be redesigned to accommodate the increase in rates of day case surgery.

Carole Longson, director of NICE's Centre for Health Technology Evaluation, said, "Whilst benign enlarged prostates may not be life threatening, the condition can impact on men's lives significantly. A procedure to reduce the amount of excess prostate tissue can improve the quality of life for men.

"Using the GreenLight XPS is more convenient for patients than other surgical procedures, as they don't need to stay in hospital overnight and they can return to normal activity faster."

Jacqui Wise, London

Cite this as: *BMJ* 2016;353:i3310

cancer (39%). But among those with a diagnosis of stage I disease survival was 98%. Nearly half of women with ovarian cancer have it diagnosed at stages III and IV. A steadily decreasing survival rate is seen with later stage at diagnosis.

**4 LUNG CANCER** One year survival after lung cancer diagnosis was low overall (34% in men), partly because so many cases were diagnosed at stage IV. Survival at stage I was 81% in men and 85% in women, but less than a sixth of lung cancer cases were diagnosed at this stage.

## 5 BLADDER CANCER

This is one disease where survival at one year was much lower in women (62%) than in men (75%). This finding is unusual, as women tend to have cancer diagnosed at an earlier stage than men and have better survival rates. But at all stages of bladder cancer women have a worse survival than men, which suggests differences in biology.

For full story go to doi:10.1136/bmj.i3277.

Cite this as: *BMJ* 2016;353:i3314



Survival rates for bladder cancer are worse in women

## NI woman denied abortion was treated inhumanely

A United Nations human rights committee has called on the Republic of Ireland to reform its draconian law on abortion, after holding that the country's virtual ban on abortion subjected a woman to cruel, inhumane, or degrading treatment, violating her human rights.

### Unviable fetus

A UN panel of experts found that Ireland's virtual ban on abortion had forced Amanda Mellet to choose "between continuing her non-viable pregnancy or travelling to another country while carrying a dying foetus, at personal expense, and separated from the support of her family, and to return while not fully recovered."

This violated her right to freedom from cruel, inhumane, or degrading treatment under the International Covenant on Civil and Political Rights, to which Ireland is a party, the panel added.



Mellet (left), a joint Irish and US national, was told in 2011 that the fetus she was carrying had congenital anomalies

that meant it would die in the womb or shortly after birth. But she could not have an abortion in Ireland, where the laws are among the most restrictive in the world, allowing abortion only if the life of the mother is seriously threatened.

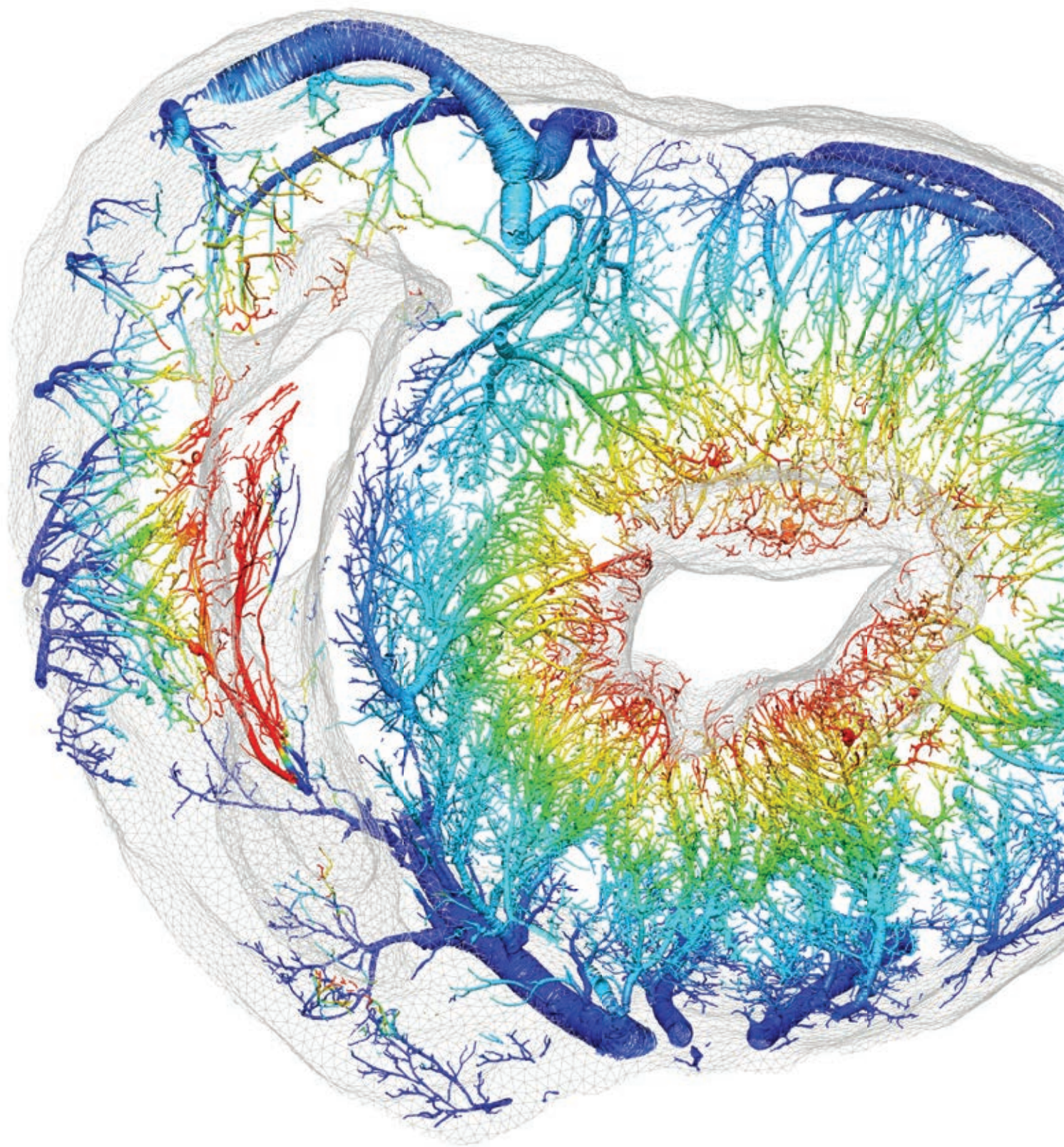
### Denied counselling

She chose to travel to the UK, paying for private treatment and returning 12 hours after the procedure because she could not afford to stay longer. She was denied the bereavement counselling and medical care available to women who have miscarriages. The committee said that this constituted discrimination.

Clare Dyer, *The BMJ*

Cite this as: *BMJ* 2016;353:i3286







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## Showing the flow

A four dimensional image (below) of a beating heart by the Oxford University researcher Victoria Stoll won this year's Reflections of Research image competition run by the British Heart Foundation.

The image, "Go with the flow," captures the flow of blood circulating through the heart.

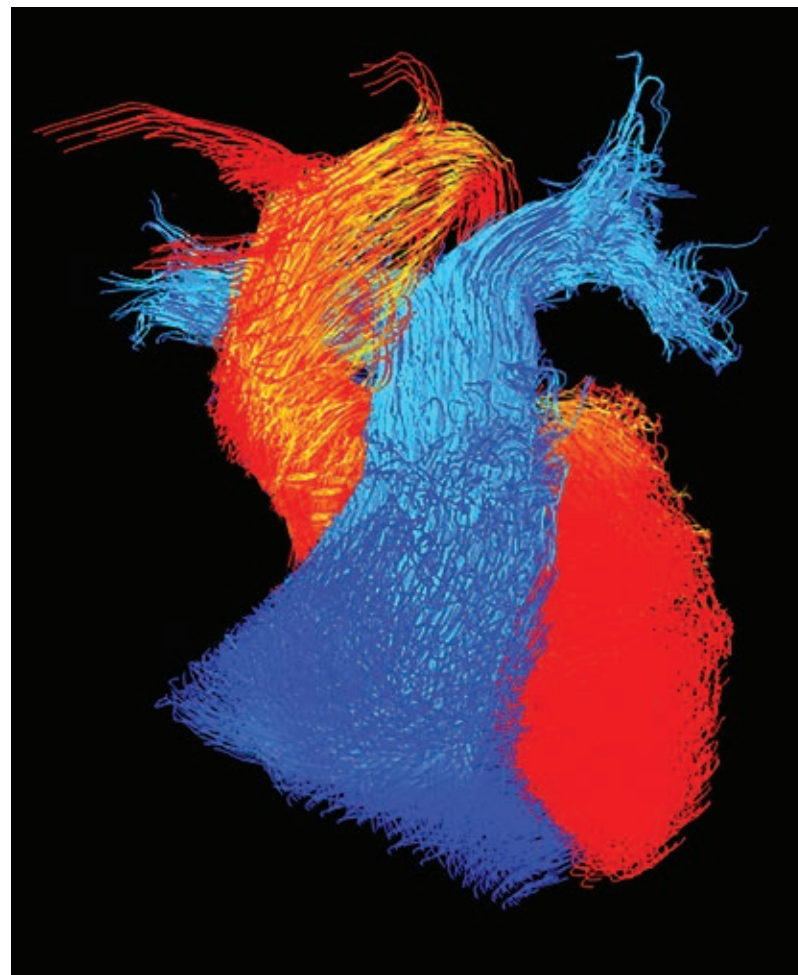
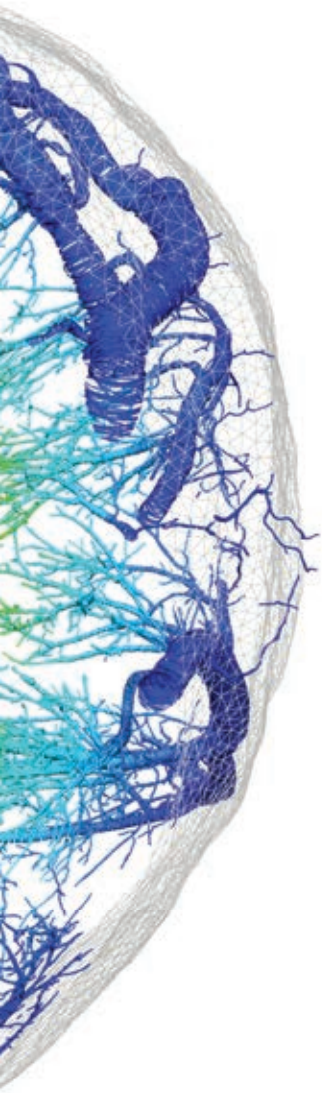
Stoll, whose research is funded by the foundation, uses four dimensional magnetic resonance imaging to look at the flow of blood within the hearts of people with heart failure. An estimated seven million people in the UK have heart and circulatory disease, which kills around 155 000 people each year—more than a quarter of all deaths in the UK. The foundation currently funds £70m of research into heart and circulatory diseases at the University of Oxford.

The other image (left) was shortlisted and taken by Simone Rivolo, from King's College London. It shows a horizontal slice of the heart with the embedded blood vessels, which were imaged and reconstructed at high resolution.

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Sophie Arie, *The BMJ*

Cite this as: *BMJ* 2016;353:i3353



# Time for evidence based research policy

And publicly funded researchers need to be candid about the likely impact of research

**D**octors are familiar with overhyped claims from drug companies and medical researchers. Once upon a time new drugs did do revolutionary things—today one might be forgiven for thinking the hype, not the making of powerful new drugs, is the business. The hype gets exceptionally uncritical coverage in media which should know better, and no obligation is felt to give a realistic appraisal of the likely impact on treatment or its timescale.

Such claims generate, rather than reflect, a deficient “public understanding of science.” But their impact and prevalence tells us of something more serious: a deficient elite understanding of the realities of modern innovation.

For example, in few areas of policy is the level of discussion as low as that around research. Policy is not so much evidence based as hype based. Indeed some might even argue that it should be so—that it is the only way to generate enthusiasm and money from an ignorant political class. It is also an

**British research produced only three biologics, out of the first 100 biotech drugs, all brought to market by US big pharma**

area of policy where ignorance of the success or failure of past policy is rife.

For this reason welcome must be given to a recent book—by a former editor of the *Financial Times* and a researcher from the Science Policy Research Unit in Sussex—that surveys the history of British efforts to promote medical biotechnology.<sup>1</sup>

Geoffrey Owen and Michael M Hopkins looked at more than 35 years of British biotech. Biotechnology was to be the next big thing—and Britain could claim a good share of it. The fact that the pharmaceutical industry was, apart from arms, the only high tech sector of British manufacturing capable of serious innovation—combined with the great strength of British bioscience—pointed to this as the sector to support. And support it got, despite the well attested phenomenon of extraordinarily low research productivity in pharmaceuticals.

Owen and Hopkins found little success to report. Most drugs produced by new drugs companies in Britain have not been biologics (biotechnological) and, even after nearly 40 years, no significant firm has been created from new biotechnology in Britain.

They conclude that there is a “dearth of outstanding successes, whether in terms of consistently profitable firms or high selling innovative drugs.” British research produced only three biologics, out of the first 100 biotech drugs, all brought to market by US big pharma.

One could add that British biotechnology and British big pharma of the past 30 years has been less successful than older British pharma, which produced penicillin and many other antibiotics as well as great blockbuster like  $\beta$ -blockers and the H2 receptor antagonists.

We need to be sceptical about exaggerated claims of British strength in either academic biomedical research or industrial strength—the

claim made by the Chancellor in 2012 that 20% of bestselling drugs come from British research is not based on any evidence I can find.<sup>2</sup>

We also need to be sceptical about the claims of global biotech. A decade ago Nightingale and Martin pointed out the “myth of biotechnology”—they showed how few significant drugs it had produced, and that what it had produced affected only small numbers.<sup>3</sup> Their analysis has not been challenged by discoveries since. Has biotech produced anything comparable to the sulphonamides or penicillin, cortisone or the Pill? The evidence, not least that provided by clinicians, suggests not.<sup>4-6</sup>

Biotech is widely used. A recent paper<sup>7</sup> calculated that total US sales of biotech (including non-medical) amounted to more than 2% of US gross domestic product. But that is not a measure of its contribution to generating GDP, or its significance more widely. What is crucial to such assessments, as discussed elsewhere,<sup>8</sup> is whether, for example, costly biologic medicines offer significant additional benefits over other methods.

## Technonationalist fantasies

We need a new rationale for the state funding of research—one that puts at its heart not techno-nationalist fantasies of economic transformation through research, but rather the need to create and control knowledge directed towards enhancing the public good. We need evidence based research policy, and to insist on an obligation of candour about the likely impact of research, at the very least from publicly funded researchers. To do that we urgently need fresh ways of thinking about the realities of innovation.<sup>2</sup> Only then will we have a policy discourse capable of effective reflection and policy making, in this most complex of areas.

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Find this at: <http://dx.doi.org/10.1136/bmj.i3146>



ANDREW BROOKES/GETTY IMAGES

Is hype, not the making of new drugs, the business?



# Fusion for lumbar spinal stenosis?

Decompression is all that most patients with one and two level stenosis require

**P**atients with lumbar spinal stenosis (narrowing of the spinal canal causing compression of the nerve roots) are best managed surgically,<sup>1</sup> but which operation should be used?

Traditionally, spinal stenosis is treated with lumbar decompression (laminectomy), but in the US increasing numbers of patients are treated with fusion in addition to decompression.<sup>2</sup> The evidence to support this change is weak, with prospective non-randomised trials showing some benefit from the addition of fusion.<sup>3</sup>

Two recent randomised controlled trials from Sweden<sup>4</sup> and the United States<sup>5</sup> give some long awaited guidance on surgical management. Both studies were of patients aged 50-80 years with “pure” lumbar stenosis; patients with scoliosis, spondylolysis (pars fracture), lumbar disc herniation, and non-degenerative lumbar stenosis were excluded. Försth and colleagues divided their patients into those with a degenerative spondylolisthesis (a vertebra slipping forward of the one below because of arthritis in the facet joint) and those without.<sup>4</sup> Ghogawala and colleagues included only patients with degenerative spondylolisthesis.<sup>5</sup> Both studies compared decompression (laminectomy) alone with decompression plus fusion.

## Stenosis without degenerative spondylolisthesis

Försth and colleagues found no significant difference in outcome between decompression alone and decompression with fusion at two and five years.<sup>4</sup> A large registry study also found no advantage to the addition of a fusion for this condition.<sup>6</sup> Hopefully, the increasing trend in

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the US to treat spinal stenosis with fusion will now reverse.<sup>7</sup> Comparable data aren't available for the UK, but future surgery for degenerative lumbar spinal stenosis without spondylolisthesis should not include decompression.

## Stenosis with degenerative spondylolisthesis

The more contentious question is for patients with degenerative spondylolisthesis, where decompression alone could result in “instability,” with possible back pain or recurrent stenosis. Reducing this potential risk comes at the cost of increased operative and postoperative complications.<sup>2</sup>

In the US, 96% of patients with this condition have fusion and decompression,<sup>8</sup> and I suspect this proportion is not much lower in the UK. Försth and colleagues found no significant difference in a disease specific outcome at two and five years for patients with degenerative spondylolisthesis who had decompression alone or decompression with fusion.<sup>2</sup> Ghogawala and colleagues<sup>3</sup> find patients in the instrumented fusion group doing “slightly” better than those having decompression alone at 2-4 years on a generic health outcome measure but no significant difference for the disease specific outcome measure.

These two studies suggest that the addition of fusion to decompression in lumbar stenosis secondary to “stable” degenerative spondylolisthesis is unlikely to give additional long term benefit. A decompression alone costs the NHS £3260, with an additional instrumented fusion making the total cost £8423, so it is certainly cost effective to perform only decompression in these patients. This conclusion is also supported by a large registry study of 1624 patients that found no difference in outcome between the two groups after two years.<sup>9</sup>



MEDICAL BODY SCANS/SPL

## Not for fusion

Both trials show that a decompression alone is all that is required for most patients with one and two level lumbar spinal stenosis. The addition of an instrumented fusion should be restricted to patients with “instability” (movement of the degenerative spondylolisthesis from supine to standing), non-degenerative spondylolisthesis, and spinal deformity.

In the UK, decompression is “non-specialised” surgery and is commissioned by the clinical commissioning groups so a national policy will not be produced to enforce change. Data collected in the British Spine Registry will be the best way of identifying use of fusion because coding combinations make this surgery difficult to identify in standard NHS datasets.

Further research is required to identify which patients with lumbar stenosis and degenerative spondylolisthesis will benefit from decompression and fusion rather than decompression alone using patient reported outcome measures and rates of revision surgery.

Cite this as: *BMJ* 2016;353:i3145

Find this at: <http://dx.doi.org/10.1136/bmj.i3145>

**Coding combinations make this surgery difficult to identify in standard NHS datasets**

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## EU REFERENDUM

### Brexit on thebmj.com

*The BMJ's* editors believe doctors should vote to remain in the EU in next week's referendum. See page 473. What do our readers think? See this selection of comments posted on doc2doc, our online clinical community, and as online responses to articles about Brexit. Find out more at [bmj.com/brexit](http://bmj.com/brexit)

#### Latest comment on thebmj.com

**Faraaz R de Belder:** Brexit may mean that restrictions and safeguards on working time for doctors are lifted with ease, returning to what are arguably unsafe conditions for both doctors and patients.

**Steven Hopkins:** Brexit is more than just how much money is available to scientists. It is about our desire for self determination. It is about democracy and free will.

#### Latest comments on BMJ's online community doc2doc



**Maxim:** The economist Galbraith said there were two types of forecasters: "those who don't know and those who don't know they don't know." When we at least have some experience of being in and have some say in matters it makes little sense to leap into the unknown when the results could be disastrous.

**Kirked:** It seems a never ending attrition of claim and counterclaim. If we stay in we are going to be subsumed into a federalist superstate crammed with bureaucratic regulations, if we leave we are doomed into exile with no one to trade with and will listlessly perish while the rest of Europe flourishes. Who is right? Heaven knows.

**JeffNevill:** We may end up remaining but that won't change the fact that a large amount of people in this country have been whipped into a mess of anti-EU and anti-migrant sentiment – and will be very, very bitter.

Our online clinical community doc2doc is closing on 29 June.  
Find out more at [doc2doc.bmj.com](http://doc2doc.bmj.com) at via Twitter at @doc2doc

#### THEBMJ.COM POLLS

In March we asked:

**Is the UK healthier in the EU?**

Yes: 620 No: 292

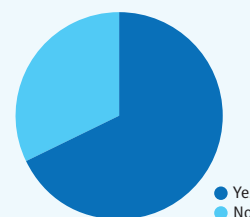
Total votes cast: 912

Latest poll:

**Which healthcare issue will most influence how you vote in the EU referendum?**

NHS funding      Employment rights      Cross-border working  
Public health      Research funding

Have your say on [thebmj.com](http://thebmj.com)







# Why doctors should vote **REMAIN**

Next week's vote on EU membership has huge implications for health. **Fiona Godlee, Kamran Abbasi, Anne Gulland and Rebecca Coombes** explain why we should stay

**T**hursday 23 June is a momentous day for the UK: voters will decide whether we should leave or remain in the European Union. In a break with tradition, we, on behalf of *The BMJ*, have decided to come out and state our considered view that the UK should remain in the EU.

Some readers may wonder why *The BMJ* is intervening in a political debate. We think this issue transcends politics and has such huge ramifications for health and society that it is important to state our case.

Over the past five weeks we have published a series of articles looking at the main arguments for leaving or

remaining in the EU in terms of their effects on health and the NHS. As always with our news coverage, we have strived to maintain neutrality, but as the series has progressed it has become increasingly obvious that the arguments for remaining in the EU are overwhelming, and that now is not the time for balance.

*The BMJ* is in good company. Over the past few months a slew of health experts have come out on the remain side. These include Simon Stevens, chief executive of NHS England; Paul Nurse, chief executive of the Francis Crick Institute; Simon Wessely, president of the Royal College of Psychiatrists; and just last week, with a change of heart, Sarah Wollaston, chair of the parliamentary

select committee on health. In a "call for views" organised by the Royal College of Physicians the opinions were overwhelmingly in favour of staying in. In fact, we realised that we could not name one prominent national medical, research, or health organisation that has sided with Brexit.

## **Leave's untruths**

The Leave campaign's arguments on the NHS are simply wrong. Its constant claim that the UK sends £350m to the EU every week has been blown out of the water by a host of financial and economic experts, including the UK Statistics Authority, the Institute for Fiscal Studies, and the Treasury select committee.



## Brexit should come with a health warning for the NHS, public health, and research

**Sarah Wollaston** explains the health concerns that led her to change her mind on Britain leaving the EU



The European Union is not perfect, and the renegotiations missed an important opportunity for reforms that could have benefited all its citizens. There are genuine concerns about democratic accountability, particularly of the Commission, and a serious disconnect between the public and the EU institutions that have such an extensive role in shaping our lives. Having started the campaign as a sceptic, however, I am now convinced that the benefits of our membership far outweigh the problems. We should not sweep the concerns, including the Transatlantic Trade and Investment Partnership (TTIP), under the carpet, but rather than walk away I believe Britain should stay and influence from within.

We need to continue to make the case for democratic reform, but I am convinced that the case for the NHS, public health, and research is overwhelmingly in favour of us remaining in the EU.

### NHS has been hijacked

The campaign has been bad tempered and poorly informed. The public deserved far better than the cynical manipulation of data, especially on the NHS. The hijacking of its trusted branding by the Leave campaign has been a disgrace, especially planted alongside a knowingly deceitful figure implying a £350m weekly Brexit bonanza could boost NHS funding. Worse still, an ugly xenophobia has swept in to whip up fears that EU immigration could lead to the collapse of NHS services. The saddest emails and conversations I have held during the campaign have been with people born overseas who have been left feeling alienated and unwelcome by the tone of the debate. Colleagues from our EU partner nations make up an essential 10% of the UK health and care workforce but only 5% of the population. My answer to the rising tide of hostile questions on the effect of migration on the NHS is that these valued health and care

workers are far more likely to be caring for you than ahead of you in the queue. The greatest contribution to rising demand in the NHS is not from those who come to live and work in Britain from abroad but from the challenge of managing complex long term conditions.

We do need to spend more on health and social care, including in my view a greater proportion of our gross domestic product, but increased spending can only come from a strengthening economy. The financial turmoil of Brexit would more than consume any gains from our net EU contribution, which averages less than £10bn a year.

There is near universal consensus that Brexit would be damaging for international cooperation, including our ability to respond to the infectious diseases that are no respecters of international borders. Britain is also a net beneficiary of EU health research funding and plays a key leadership role. While

### These valued health and care workers are far more likely to be caring for you than ahead of you in the queue

scientists would no doubt do everything possible to maintain links, our influence would be severely diminished from the outside. The EU could go further to support public health, but that will also take a greater engagement with our MEPs and direct campaigning from the grassroots.

Considering all aspects of the debate, including those beyond health and research, I know that I would feel a profound sense of loss if I woke on 24 June to the news that Britain had voted for Brexit. If that prospect fills you will horror too, it's time to get out and make the case for us to remain.

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The Leave Campaign claims that if the UK remains in the EU, the NHS will be swamped by immigrants, desperate to make use of our free health service. A London School of Economics review of the impact of immigration on the UK found that, because EU migrants tend to be young they make less use of health services, and that some may even return home for healthcare because they can get quicker access to specialists.

But perhaps the most laughable untruth is that the NHS would be safer in their hands. As John Major said when interviewed on the BBC, the NHS is about as safe with the prominent Vote Leave campaigners "as a pet hamster with a python."

### Damage to finances and influence

So what would happen to the NHS if we left the EU? Last week the Economist Intelligence Unit calculated that, because of the impact of Brexit on the wider economy, healthcare spending per head would be around £135 lower by 2020 than it would be if the UK stayed in the EU. This is on top of the £22bn in efficiency savings the NHS is still expected to deliver by 2020. At a time when the NHS is already overstretched we should not risk putting it under further financial strain.

The NHS relies on overseas doctors and nurses—both from within and beyond the EU. One in 10 of the doctors working in our health service was trained in another EU country.

**The NHS is about as safe with the prominent Vote Leave campaigners "as a pet hamster with a python"**

Those already here would not be sent home tomorrow if we pulled up the drawbridge, but leaving the EU would jeopardise the free movement of people on which our health service depends.

London is home to the European Medicines Agency, which would have to move if the Brexit campaigners win on 23 June. Playing host to the agency gives the UK clout<sup>1</sup> in regulatory affairs and also makes the UK an attractive place for US and Asian firms to base the European arm of their clinical trials. And while we may still get access to research funding if we quit the EU, we would no longer have influence in shaping the research agenda.

Doctors have a duty to engage in this debate, especially those still in training.





# What the leave campaign said about the NHS and how the experts answered

## Claim 1: Let's spend our money on the NHS, not the EU

"We should stop sending £350m per week to unelected politicians in Brussels and spend our money on our priorities, like the NHS."<sup>1</sup>

### RESPONSE

The Institute for Fiscal Studies (IFS) said that it did not believe, as the Leave Campaign suggests, that the £8bn annual windfall from leaving the EU it has calculated would lead to a cash injection for the NHS. "There is virtual unanimity among economic forecasters that the negative effect of leaving the EU would be greater."<sup>3</sup>

NHS England chief executive, Simon Stevens, expressed deep concern over the effect of a possible economic downturn, as predicted by Mark Carney, governor of the Bank of England, on the NHS. Stevens said that UK Statistics Authority figures suggest the money freed up by leaving the EU would at best fund the NHS for 19 days a year.<sup>4</sup>

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## Claim 2: Freedom from Brussels red tape

The "dysfunctional European Union" is killing our health service with excessive regulation and constant meddling. Brussels has become "entrenched" within the NHS and the referendum is a "once-in-a-lifetime opportunity" to break free, according to Lord Owen, a doctor and former foreign secretary who is leading Vote Leave's Save our NHS campaign.<sup>5</sup>

### RESPONSE

Some EU regulations may seem unnecessary and time consuming but others provide protection for workers and the public, which is one of the main reasons the major unions cite for backing the Remain campaign. The BMA has said it remains neutral, but its briefing on Brexit and health<sup>6</sup> highlighted the huge importance of the European Working Time Directive, which protects doctors from the dangers of overwork and patients from overtired doctors.

It also points out that EU membership has brought improvements in UK policy on public health that "may not have been delivered by our own governments."

## Claim 3: Protect the NHS from EU migrants

The Vote Leave campaign has said that another five countries could soon join the EU, most notably Turkey, and this will add between 2.58 million and 5.23 million people to the population of the UK by 2030. The consequences for the NHS will be a rise in emergency department attendances of between 6.3 million and 12.8 million a year, the equivalent of a rise in demand for emergency services of between 28% and 57%.<sup>7</sup>

### RESPONSE

Remain campaign leaders argue that Turkey is not anywhere near joining the EU, and, if anything, the chances of this happening are lower now than a few years ago because of growing concerns over democracy and human rights there.<sup>8</sup>

Health experts have voiced more concern about the possible effects of Brexit on NHS staffing. In a survey, 75% of hospital chief executives said leaving the EU could cause a staffing crisis in the NHS because 130 000 NHS staff are from EU countries.

## Claim 4: The NHS will be destroyed by competition under the TTIP

Nigel Farage, leader of the UK Independence Party (UKIP), said: "Huge American corporations want to use Transatlantic Trade and Investment Partnership (TTIP) to get their hands on the NHS so they can asset strip it for profit."

### RESPONSE

Martin McKee, a professor at the London School of Hygiene and Tropical Medicine and director of pro-remain group Healthier In (<http://healthierin.eu/>), says his initial concerns about the TTIP agreement have been allayed.

"There are protections for public services—specifically health services, but also education, social services, and police services," he wrote in *The BMJ* in May.<sup>10</sup> "Recent leaks have confirmed that the US is pushing its own interests strongly, but both the European Commission and the president of the European parliament have made it absolutely clear that unless the Americans accept European protections for health services and public health there will be no agreement."

Junior doctors have—rightly—spent huge amounts of time and energy campaigning over their new contracts. They are currently poring over the small print of the revised contract before voting on whether to accept it. But by the damage it would cause to the economy, leaving the EU could have an even greater effect on their working lives and on patients.

### Resurgent nationalism

Those who want the UK to leave are not unlike the antivaccine lobbyists who, having forgotten the evils of measles, mumps and rubella, turn to the alleged harms of the vaccines themselves. Likewise Brexit campaigners have forgotten the

**In Ukraine, deep political unrest has conjured a public health nightmare: widespread multidrug resistant tuberculosis, aggravated by war**

evils of virulent nationalism because Europe has succeeded in containing them.

After two devastating world wars, a progressive social democratic consensus emerged in Europe. And governments have pursued redistributive policies within the expanded EU bringing enormous gains for health and social justice. But these policies are under threat, menaced by a resurgence in right wing nationalism in Poland, Hungary, Austria, and beyond.

These are not just dark fantasies; the refugee convention is already being torn up. And in Ukraine, deep political unrest has conjured a public health nightmare: widespread

multidrug resistant tuberculosis, aggravated by war in the east of Ukraine, leading to a million people being internally displaced.

If the UK pulls out of the EU we could see a domino effect if the Netherlands, Denmark, and other member states follow suit. Do we really want to see barriers going up all over Europe again? Europe is not perfect and it needs reform. But let us remember what went before. Both Europe, and Britain within it, are better off if we vote to remain.

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# Expand non-medical roles to give doctors training time, royal college says



**N**on-medical staff should be given fully developed roles in extended surgical teams to let junior doctors devote more time to their training, the Royal College of Surgeons has said.

More patients could be treated by the growing numbers of non-medical practitioners, such as advanced nurse practitioners, physician associates (PAs), and surgical first assistants, the college said.

This could enhance patient care, surgical training, and consultant teams—but the roles of non-medical practitioners must be properly developed, “better aligned with the

surgical profession,” and made part of the NHS’s workforce planning, it argued.

The college said that its report on the issue “challenged the status quo that doctors in training should be the default providers of frontline medical services.”

Ian Eardley, the college’s vice president and a consultant urologist said, “If the NHS, government, and medical professionals don’t do more to properly plan how these roles are used and find ways to better support them in their careers, the opportunity to use them to their full potential could be missed.”

The report, entitled *A Question of Balance: The Extended Surgical*

**Well managed use of the extended surgical team could support doctors and enhance training**

*Team*, was co-funded by Health Education England.

It found that there were concerns about the time available for core and foundation training, about the demands placed upon trainees to cover the service, and their exposure to common surgical conditions.

Some of the staff surveyed said that doctors in training today were less competent—and less useful to the service—than they used to be and that newly qualified consultant surgeons were often less confident.

The college said, “These perceptions, while anecdotal, confirm worries expressed by many within the surgical profession about the state of training.”

The report highlighted ways that well managed use of the extended surgical team could support doctors and enhance training.

These included letting doctors in training leave the wards to attend teaching, outpatient clinics, or theatres; aiding continuity of care; and helping new doctors settle into rotations more quickly.

It is also argued that extended surgical teams could be used to reduce the number of occasions that higher surgical trainees were called out of theatre, ease the administrative burden, and give consultants confidence to “step out of the room and leave senior

## FIVE DATA PROBLEMS FACING PUBLIC HEALTH OFFICIALS

Officials from Public Health England (PHE) told MPs earlier this month about some of the data challenges facing the public health service

### 1 PERCEPTION

PHE’s medical director, Paul Cosford, told MPs that, although its data on staffing showed “really quite a positive picture,” people still had “uncertainties” about the stability of the public health workforce. “There is no evidence I’m seeing that we’re getting significant reductions in numbers of trained public health specialists in posts.”

### 2 UNDERSTANDING

Cosford said PHE was seeking to improve the workforce data it held to “navigate our way through and make sure we really understand what’s going on underneath.” He added, “We’re implementing a national minimum dataset for the public health workforce. We are piloting it so we understand the situation in much greater detail.”

### 3 ANALYSIS

MPs asked PHE whether it was concerned about the shortage of data analysts in the new system. “There will never be enough people,” replied John Newton, PHE’s chief knowledge officer. “There are so many data, and so many questions we might ask, that we will never have enough capacity to analyse all that we want.”

### 4 ACCESS

Public health directors cannot access the data they need to do their jobs, and this makes it hard for them to do “ad hoc” research locally, Newton said. He added that public health directors had difficulty gaining access to data on healthcare activity and on the services they commission, such as vaccination and screening services.



trainees to operate with a skilled assistant.”

Eardley told BMJ Careers, “We found there were lots of ways a non-medical workforce could support juniors—they could do some of the admin and some clinical tasks—and the impression we got was that it would enhance the training of the medics who were there.

“The view we came to was that often they provided the glue that held the medical team together.”

The college said that it found “no basis for concern” that the greater use of non-medical practitioners diluted surgical training opportunities for junior doctors.

But it said that there were challenges to making the most of the extended surgical team, including making roles clear.

Standards should be developed to guide the evolution of new non-medical roles within surgical specialties, the college said.

It said that Health Education England should consider if physician associates were being trained in sufficient numbers to support the surgical workforce.

In addition, there should be a close look at whether clinical placements were given enough exposure to surgery to attract physician associates into surgical departments once qualified.

Matthew Limb, BMJ Careers

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## 5 BARRIERS

Newton said that legal barriers also meant that identifiable personal health information would be passed to local government only on a strictly controlled basis. He said that these access problems were “surmountable” and that “legal gateways” existed but that access relied on good local relationships between NHS and local government bodies.

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# BMA to debate whether new junior contract disadvantages women

Doctors from across the profession are set to discuss whether the proposed new contract for junior doctors in England will disadvantage women, particularly those who train part time or have children.

Delegates at the BMA's annual representative meeting (ARM) in Belfast will discuss the issues on Thursday 23 June. The motion is one of several that focus on issues related to the new contract. It says, “This meeting is appalled that changes in the junior doctor contract will disadvantage women, particularly those who are training part time, or who are carers or lone parents.”

Doctors previously raised concerns that the new contract discriminated against women when the government published an equality analysis of the draft contract. The contract was changed to reduce its negative effects on women, and agreement on it was reached between the BMA and the government in May. After the agreement the government introduced a further amendment to ensure that trainees who worked less than full time were paid fairly for working at weekends.

Delegates at the BMA's annual meeting will also debate whether they condemn the imposition of a contract on junior doctors and whether they believe that Jeremy Hunt “has destroyed morale among doctors in the NHS.”

Doctors will discuss whether trainees should have a “single lead employer” for the duration of their training programme, so that their continued service was recognised. The motion says that a single lead employer would cover whistleblowing issues, travel expenses, and parental leave. Having



a single employer would also negate the need for repeated disclosure and barring service (DBS) checks, and a single employer would take “full responsibility for ensuring legal working hours across changeover between posts,” the motion said.

On Wednesday 22 June doctors will discuss doctors' contracts more broadly. They will vote on a motion calling for on-call working requirements to “take account of the risks of sleep deprivation and the need for safe practice.” The motion also says that “contractual clauses limiting the freedom of speech of individual doctors are unacceptable” and argues that “all training is work and should be included in the work schedule” and that childcare provision “should be available to match the work requirements of doctors.”

Abi Rimmer, BMJ Careers

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### ARM debate on seven day services

On the first day of the BMA's annual representative meeting, on Monday 20 June, doctors will take part in an open debate on seven day services in the NHS. Ahead of the debate Paul Aylin, co-director of the Dr Foster Unit at Imperial College London, and Tim Doran, professor of health policy at the University of York, will present research on seven day services.

The discussion will be followed by a vote on a motion which “condemns the persistent misinterpretation by politicians of data on morbidity adjusted hospital mortality, by day of week,” and “demands that the government should be evidence based in its approach.”

Doctors will also vote on a motion stating “unequivocal” support for patients having access to the same high standard of urgent and emergency care throughout the week. It also called on the government to “publish a fully funded model for how it will deliver on its manifesto commitment for a seven day service.”



Chris Rudge, 67, is chair of the UK Donation Ethics Committee, which recently learnt that its funding from the Department of Health will be terminated. He is a transplant surgeon, having held posts at Guy's and St Peter's hospitals, and from 1994 to 2001 he was director of transplantation at the Royal London. He became medical director of UK Transplant in 2001 and national clinical director for transplantation in 2008. He warns that, without the clear ethical framework of the ethics committee, progress in organ donation may suffer—including when families decline organ donation in contradiction of a donor's known wishes. A discussion paper on this will be among the committee's final acts. Rudge retired from the NHS in 2011.

## BMJ CONFIDENTIAL

# Chris Rudge A life in transplantation

### What was your earliest ambition?

To do medical research. No one in my family knew anything about it, so my eccentric mother rang the Medical Research Council for advice when I was about 13 and was told (possibly by the receptionist) that it may help to be a doctor.

### Who has been your biggest inspiration?

It probably started with Christiaan Barnard and the heart transplant he performed in 1967, but it's not really fair to choose just one person. Above all, I've been inspired by patients and a desire to offer them better outcomes from transplantation.

### Bevan or Lansley? Who has been the best and the worst health secretary?

I knew only three while I worked in the Department of Health, but Alan Johnson was very impressive—he had common sense and humanity, combined with understanding.

### Who is the person you would most like to thank, and why?

Mary, my wife, for letting me wander through my career/working life.

### To whom would you most like to apologise?

Mick Bewick, a transplant surgeon at Guy's, then at St George's; I owe all of my early transplantation training to him. I shared his approach until we became consultant colleagues, and then I suddenly wanted to go my own way. I never truly thanked him for everything he did to help me become a transplant surgeon.

### Where are or were you happiest?

Getting our two boys and their families together is very special. It's difficult to choose a single thing, although a day in the pavilion at Lord's, watching Test match cricket, is about as good as it gets.

### What single unheralded change has made the most difference in your field?

Perhaps the most important change was the general acceptance, starting in the late 1970s, that transplantation was here to stay. It's easy to forget the previous awful results and the real uncertainty as to whether transplants should be done at all.

### Do you support doctor assisted suicide?

Strongly—with the right caveats. I've always thought that part of a good doctor's work was to make inevitable death as acceptable and comfortable as possible, and I believe that helping a patient to die by suicide is entirely appropriate.

### What book should every doctor read?

*The Shadow Line*, by Joseph Conrad, and the associated *Lancet* paper by Richard Hayward, *The Shadow Line in Surgery* (*Lancet* 1987;1:375-6). The book describes how a young sea captain tries to cope with problems at sea; the paper relates this to surgery and the inevitable need for a young surgeon to "come to terms with the inadequacies and sometimes downright failures of his or her actions that will be inevitable companions during a surgical life." I have no doubt that this is equally relevant to non-surgeons.

### What is your most treasured possession?

The CBE medal I was awarded in 2012, which was presented to me by the Queen.

### What is your pet hate?

The way the mass media, particularly the press, distort their reporting.

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