this week

60 SECONDS ON ZAVICEFTA page 463 • **CCG STOPS FUNDING IVF** page 464

EYE UBIQUITOUS/REX/SHUTTERSTOCK

Call for national rules on OTC scripts

Cost cutting plans from clinical commissioning groups (CCGs) to limit GPs' prescribing of over-the-counter (OTC) medicines have sparked debate among doctors and prompted calls for national guidance.

In a letter to local GPs on 13 March 2017 obtained by *The BMJ*, Lambeth CCG set out new plans to limit GP prescriptions of OTC medicines as part of a push to save money by promoting self care. This follows similar moves by a string of CCGs including Bristol, Lincolnshire, and Essex.

Azeem Majeed, head of the department of primary care and public health at Imperial College London and a GP in Lambeth, said he was concerned that policies were being applied on an "ad hoc" basis by CCGs and called for them to be set by national policy makers. He warned that such policies could disproportionately affect poorer patients who are less able to buy medicines over the counter.

But Clare Gerada, former chair of the Royal College of General Practitioners and also a GP in Lambeth, said that she backed the policy because of the high cost to the NHS of prescribing drugs that patients can buy more cheaply in pharmacies and supermarkets.

Lambeth CCG's letter listed 22 therapeutic areas in which it proposes to limit prescriptions of OTC medicines, subject to consultation (see box, p 464). These include analgesics for short term use, topical steroids, antifungal treatments, and eye treatments.

It stated, "Lambeth CCG spends around £1m a year on self care over the counter medicines. These products can be easily purchased from a supermarket or pharmacy e.g. paracetamol, cough and cold remedies and hay fever medicines. Some of these medicines also have limited clinical value."

The CCG emphasised that promoting self care was part of the South East London sustainability and transformation plan.

But Majeed said he was concerned that policies were being applied unevenly.

"There is a case for some drugs being removed from the NHS, but in my view that should be done nationally with a full public consultation and not just ad hoc by different CCGs," he said. "If each CCG has its own lists of drugs [that] it doesn't want doctors to prescribe, there will be considerable variation, thereby leading to 'postcode prescribing.'"

(Continued on page 464)

"Postcode prescribing" was a real risk if there was no national policy on what OTC drugs should be available on the NHS, said Azeem Majeed, a GP in Lambeth

LATEST ONLINE

- Paediatrician who ignored calls to examine child who later died is struck off
- US first year residents may work 24 hour shifts again after rule change
- Parents gave baby alcohol and antihistamines in case of induced illness

SEVEN DAYS IN

Hospitals will get £800m earmarked for CCGs

Millions of pounds in funding earmarked for mental health, community health, and primary care services are to be diverted to plug acute care hospitals' deficits this year, it has emerged.

In a letter to clinical commissioning groups obtained by the *Health Service Journal*, NHS England's chief financial officer, Paul Baumann, confirmed that an £800m contingency fund that was stripped out of CCGs' budgets in 2016-17 will be retained in full by the Department of Health to help reduce the overall deficit that largely stems from hospitals. NHS trusts in England are set to record a combined end of year deficit of almost £900m after record levels of demand for hospital treatment this winter.

NHS England's chief executive, Simon Stevens, had reluctantly agreed to hold back the money from CCG budgets in 2016-17 to try to bring overall deficits under control, but he emphasised his desire to release the money to CCGs to spend on areas such as mental health, community health, and primary care.

Mark Porter (left), the BMA's chair of council, described the move as "scandalous" and urged the government to put forward a credible long term funding plan rather than resorting to "sticking plaster measures."

Gareth Iacobucci, *The BMJ* Cite this as: *BMJ* 2017;356:j1382

Maternity services

Pregnant migrants are too afraid to seek NHS care

Pregnant women without legal status avoid seeking antenatal care or seeing a GP because they fear that they will be reported to the Home Office or face huge medical bills, Doctors of the World said. The charity said that it had seen billing letters to women threatening to discontinue antenatal care without an upfront deposit of £6500. This breaches NHS guidelines, which state that migrants can be charged 150% of the cost of hospital care but that urgent care should not be withheld because of charging issues. Vulnerable people, including asylum seekers and refugees, are not charged.

Genetics

Clinic is granted licence to carry out "three parent" IVF

Newcastle Fertility Centre became the UK's first clinic to be allowed to offer pioneering treatment to prevent transmission of mitochondrial disease from mother to baby, after being licensed by the Human Fertilisation and Embryology Authority. Pronuclear transfer uses DNA from the mother and father and a female donor. Doug Turnbull, director of the Wellcome Centre for Mitochondrial Research at Newcastle University, said, "This is a momentous day for patients who have tirelessly campaigned for this decision."

Antibiotic resistance

Davies joins global war on antibiotic resistance

Sally Davies (below), England's chief medical officer, joined a group of international experts, led by the United Nations and the World Health Organization, to tackle drug resistant infections. Davies, who has spent many years raising awareness of this threat, will work with experts and international groups to ensure that countries stick to their pledge, signed at the UN last September, to implement measures such as encouraging new antibiotic development and raising awareness among health professionals and the public.

Mental health

MPs urge better follow-up

Patients being discharged from inpatient specialist mental healthcare should receive follow-up support within three days to reduce their risk of suicide, the Commons Health Select Committee urged. The committee said it was "disappointing" that the government's updated national suicide prevention strategy did not improve on the current standard, that patients should receive follow-up support within seven days of discharge.

Research news

Canadian cystic fibrosis patients live longer

Patients in Canada with cystic fibrosis live almost 10 years longer than their US counterparts (50.9 years *v* 40.6), a study in the *Annals of Internal Medicine* showed. The researchers said that access to insurance may explain some of the difference in survival, as no significant difference was found in the risk of death between Canadians and the US patients who had private insurance.

NSAIDs are linked to cardiac arrest risk

Use of the non-steroidal anti-inflammatory drugs diclofenac and ibuprofen was associated with a significantly increased risk of cardiac arrest,

a study found in the *European Heart Journal—Cardiovascular Pharmacotherapy*. Use of any NSAID was associated with a 31% increased risk of cardiac arrest; diclofenac was associated with a 50% increased risk and ibuprofen a 31% increased risk.

Wales

Failure to improve patient nutrition is condemned

The Welsh Public Accounts Committee criticised "intolerable" delays in implementing measures to improve patient nutrition and hydration in hospitals. Lack of staff training and leadership were identified as the main reasons why recommendations from 2011had not been implemented. The committee did not identify a single director on Welsh health boards with responsibility for patient nutrition, and it found that NHS Wales had not appointed a lead nurse specialist to establish an All Wales nutritional care pathway and did not intend to do so for another three years.

MEDICINE

NHS performance

Too much is asked of NHS trusts in 2017-18

NHS trusts will not be able to deliver on all that is asked of them in 2017-18, a report from NHS Providers said. Trusts have been asked to absorb a 3.1% increase in demand and a 2.1% rise in the cost of delivering services, to meet key performance waiting time targets, and to return to financial balance collectively (an improvement of £800m-£900m). Meanwhile, extra funding from NHS England will drop from 3.6% this year to 1.3%. Chris Hopson, NHS Providers chief executive, said, "It is unprecedented for us to warn that the NHS will not be able to deliver on its commitments before the financial year has even started, [but when trusts say] they can't deliver what's currently being asked for next year, it is time to sit up and listen."

Workforce

NHS whistleblower protection will improve

Anyone applying for an NHS job will have the right to complain to an employment tribunal if they have been discriminated against because of previously raising concerns about NHS patient safety, say UK-wide draft plans from the Department of Health. Applicants would also have the right to bring a claim in court to prevent discriminatory conduct. The proposals say that discrimination against an applicant by an NHS worker should be treated like discrimination by the NHS body itself, and they set out the remedies that a tribunal should award if a complaint is upheld.

Rural locations: not "idyllic" in health terms

Rural health

Truth is hidden behind "picture postcard" image

Poor health in rural areas is "masked" by "idyllic images" of the English countryside, said local government and public health leaders in a joint report. Official statistics do not paint an accurate picture of people's health outside cities, they warned. The report said that a sixth of areas with the worst health and deprivation in England are in rural areas; residents of rural areas are more likely to be over 65 than those in urban areas (23.5% *v* 16.3%); and rural residents are less likely to live within 4 km of a GP surgery (80% *v* 98%) and 8 km of a hospital (55% *v* 97%).

Drug costs

NICE sets £20m drug cap

The National Institute for Health and Care Excellence published plans that would block the introduction of any new drug likely to cost the NHS more than £20m a year. This is to enable NHS England to enter a "commercial agreement [with] the company" to reduce the impact on drug budgets. It also proposes to fast track drugs with a likely cost per extra year of quality adjusted life of under £10 000 that are not expected to breach the £20m threshold.

Cite this as: *BMJ* 2017;356:j1435

EDITORIAL, p 470

CAUDA EQUINA SYNDROME

The Medical Defence Union paid out **£8m** in compensation and **£4.5m** in claimants' solicitors' costs to settle claims for alleged failure to diagnose cauda equina syndrome from 2005 to 2016

SIXTY SECONDS ON . . . ZAVICEFTA

A NEW ANTIBIOTIC? GREAT

Growing antimicrobial resistance is a serious threat, so any evidence that the drug industry is focusing on new antibiotics is cheering.

THE HEADLINES SAY THAT IT WILL TACKLE RESISTANCE

That's the claim. Zavicefta combines an established antibiotic, ceftazidime, with a second component, avibactam, designed to inhibit one of the pathways by which antibiotics acquire resistance.

IS THIS NEW?

No. Beta lactamase inhibitors such as avibactam have been used in the past with the same objective.

WHAT MATTERS IS WHETHER IT WORKS

Indeed. The trial results are satisfactory but hardly startling. When compared with existing antibiotics in the carbapenem class, Zavicefta either alone or in combination with metronidazole did just about as well but no better. In other trials it did no better than ceftazidime alone, because antibiotics can become resistant by several routes and Zavicefta tackles only one of these.

NO MAGIC BULLET, THEN?

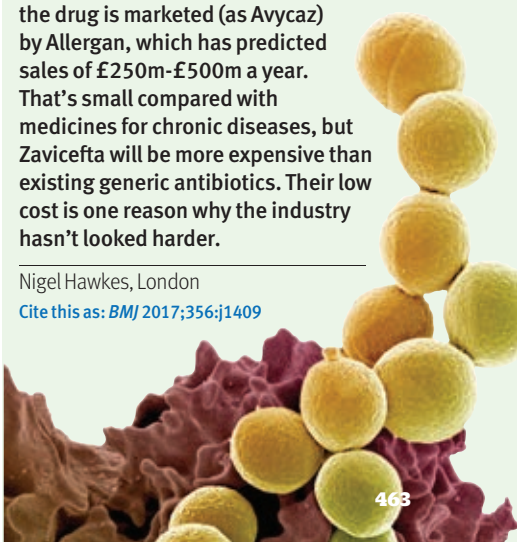
It doesn't seem so, but we shouldn't complain: every new antibiotic is another tool in the armoury. It may work in some cases where others don't. It's licensed in Europe for complex abdominal and urinary tract infections, hospital acquired pneumonia, and infections caused by gram negative bacteria where other antibiotics may not work.

IS PHARMA WARMING TO ANTIBIOTICS?

It would be nice to think so. Pfizer acquired European marketing rights when it bought out AstraZeneca's antibiotic arm. In the US the drug is marketed (as Avycaz) by Allergan, which has predicted sales of £250m-£500m a year. That's small compared with medicines for chronic diseases, but Zavicefta will be more expensive than existing generic antibiotics. Their low cost is one reason why the industry hasn't looked harder.

Nigel Hawkes, London

Cite this as: *BMJ* 2017;356:j1409



(Continued from page 461)

Majeed warned that GPs could be vulnerable if a patient complained about being denied treatment. "Legally, if a doctor doesn't issue a prescription and a patient complains, it's the doctor who has to defend that complaint," he said.

Adrian McLachlan, chair of NHS Lambeth CCG, said that the plan aimed to free up clinician time for patients with more complex needs.

"The proposals, if taken forward as guidance, do not impinge on the primacy of GP clinical judgment when considering whether it is acceptable to ask a patient to purchase their medication," he said.

Michelle Drage, chief executive of Londonwide LMCs, said that asking GPs to assess patients' ability to pay for OTC medicines places "an unnecessary strain" on the doctor-patient relationship.

"If the NHS believes it can no longer afford to pay for prescriptions for certain OTC medicines there needs to be a decision to produce a definitive list of these at a national level, rather than leaving each CCG to come up with its own plan, or dumping the risk onto hard pressed GPs, nurses, and practice staff," she said.

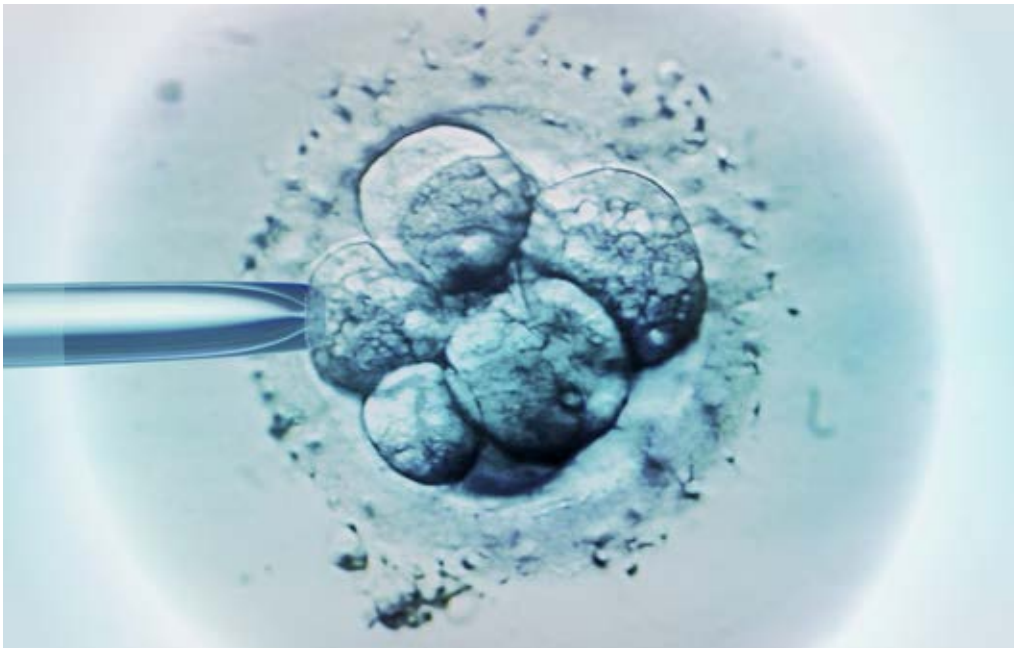
Gareth Iacobucci, *The BMJ*

Cite this as: *BMJ* 2017;356:j1442

PROPOSED AREAS TO LIMIT PRESCRIPTIONS

- Vitamins, minerals, and herbal supplements
- Analgesics for short term use
- Seasonal rhinitis
- Eye treatments/lubricating products
- Antifungal treatment
- Indigestion remedies
- Laxatives for short term use
- Topical steroids for short term use
- Mouthwash and ulcer treatment
- All cough and cold remedies
- Anti-diarrhoeal short courses
- Head lice and scabies treatment
- Haemorrhoidal preparations
- Wart and verruca treatments
- Topical acne treatment
- Cold sore treatment
- Ear wax removers
- Nappy rash treatment
- Threadworm tablets
- Colic treatment
- Antiperspirants

Croydon CCG stops funding IVF treatment to save £800 000 a year



Campaigners fear that a hospital fertility centre could close after NHS commissioners in Croydon became the first in London to stop routine funding of in vitro fertilisation (IVF) treatment.

The NHS Croydon clinical commissioning group (CCG) said that it had taken the decision to help save over £800 000 a year, although 77% of people who responded to its consultation had opposed the closure. Agnelo Fernandes, a Croydon GP and the CCG's assistant clinical chair, said, "This is one of the hardest decisions of my professional career, and I wish we were not in the position of having to make it."

Croydon Health Services NHS Trust said that the future of the service at Croydon University Hospital was now "uncertain," as the CCG was its main commissioner.

A trust spokesperson said, "Croydon CCG has made a very difficult decision, but the impact cannot be underestimated. Our

Diabetologist and former journal editor faces charges of data fabrication

A consultant diabetologist who edited the *British Journal of Diabetes* from 2014 to 2016 is facing allegations by the General Medical Council that he fabricated research data.

Paul Grant was also appointed editor in chief of *Clinical Medicine*, the journal of the Royal College of Physicians, before the allegations emerged, but he never took up the post.

At a four week hearing of the Medical Practitioners Tribunal Service that opened on 13 March, the GMC accuses Grant of a catalogue of research misconduct, including forging the signatures of coauthors, listing doctors who had not significantly contributed to papers as coauthors, and fabricating data.

The allegations concern five studies, but the most serious charges relate to two papers that Grant coauthored while working as a registrar at King's College Hospital in London. The papers, which were published in 2012 and 2013, have both been retracted.

The charge of data fabrication relates to a study of anxiety and depression in 350 patients with type 1 diabetes who received insulin pump therapy at King's. The retraction notice states, "It appears that the study was carried out without the knowledge or authorisation of the senior staff of King's College Hospital NHS Foundation Trust, in particular without endorsement of some coauthors.

"In addition, it was submitted without prior

IVF service has treated thousands of women.

"The CCG has made a commitment to continue funding patients already on our waiting list. However, as of 14 March 2017, the CCG will only consider IVF funding applications from GPs or consultants for those with exceptional clinical circumstances."

A campaign group, Fertility Fairness, said that Croydon had become the fifth CCG in England and the first in London to stop routine IVF funding, following on from Basildon and Brentwood CCG, North East Essex CCG, South Norfolk CCG, and Mid Essex CCG.

Steve Reed, Labour MP for Croydon North, said this meant that the fertility unit at Croydon University Hospital could close and cause "heartbreak" for couples forced to seek private treatment.

"Croydon CCG should rethink their decision, and the government should step in and give our NHS the funding it needs to maintain services," he said.

NHS Croydon CCG's governing body decided on 14 March to fund IVF and ICSI (intracytoplasmic sperm injection) "only for those with exceptional clinical circumstances."

Asked about the future of the fertility clinic, a CCG spokesperson told *The BMJ*, "In response to the concerns regarding potential clinic closure, we have provided a list of alternative providers of IVF, which can be found in our governing body papers."

Fernandes commented, "This is a very emotional subject—and that is shown in the majority objection we have had to this proposal through the consultation. However, it is our role to look at the entirety of health needs across the borough, and we have a statutory duty to prioritise the limited resources we have available to us."

Emily Symington, a GP member of the CCG, said that the decision would be reviewed in a year's time. "I think we owe it to the people who will be affected by this decision to do everything we can in the other areas of our financial savings plan so that, in the future, we hope to be financially able to reinstate this funding," she said.

Croydon CCG had been funding around 150 cycles of IVF a year, costing over £800 000. It was offering one IVF cycle to couples, compared with the three cycles recommended in national guidance. Croydon CCG has said that it needs to save almost £36m in 2017-18, about 6% of its £482m commissioning budget for local health services.

The CCG and Croydon Health Services NHS Trust were both placed in financial special measures in 2016, although these were lifted from the trust in 2017.

Matthew Limb, London

Cite this as: *BMJ* 2017;356:j1403

Grant is accused of failing to obtain permission to access the database of patients using insulin pumps

knowledge or consent of the people in the acknowledgements. The study had not been authorized by the institution."

Grant is accused of fabricating the mean age of the cohort of pump patients, the mean duration of diabetes, and the total maximum prevalence of all psychological or psychiatric morbidities. In that paper, and a related study on psychopathology in pump patients, he is accused of failing to obtain permission to access the database of patients using insulin pumps and breaching patients' confidentiality in accessing the electronic records of those whose cases he was not involved in.

The other retracted paper was a study of salt and water imbalance after pituitary surgery. Grant admitted that he submitted the paper without making changes demanded by his coauthors and knowing that they had not seen the final version, and he admitted forging coauthors' signatures on the copyright assignment form.

Grant, who qualified in 2002 at the University of London, is now a consultant community diabetologist in Brighton.

Clare Dyer, *The BMJ*

Cite this as: *BMJ* 2017;356:j1348

FIVE MINUTES WITH . . .

Michael Keighley

The surgeon talks about a new charity (masic.org.uk) for women with anal injuries from childbirth

"Around one in 10 first time mothers who give birth vaginally can develop some form of anal incontinence. It presents as an inability to hold wind or faeces. They may also need the toilet very urgently.

"No one ever really thinks of the true effect of these injuries, but stigma affects women in the UK. I've conducted focus groups with women who have to hide dirty sheets from their husbands. And it's a social barrier, as they feel trapped in their homes because they're worried that they won't be near a toilet. Employment is a problem, too.

CONTROLLED DELIVERY HAS REDUCED THE RATE OF TEARS FROM 8% TO 3%

"Surgery is really the only treatment available to women, but all you can do is make them a bit better. If a woman can hold her stool in for only one minute and surgery increases that to three or four minutes this can make a difference, but things often deteriorate over time.

"Problems can also arise after the menopause: many women discover that they can't control gas or faeces and it's discovered that they've had a tear in the past. GPs may not know about this, and women are often given a diagnosis of irritable bowel syndrome.

"A programme is being run by the Royal College of Midwives and the Royal College of Obstetricians and Gynaecologists to change practice during childbirth. Over the years it's been common for midwives to step back and let the mother get on with it. Often the head comes out in a big rush, and the incidence of tears is quite high.

"The colleges are now running a study to see whether they can get the woman to hold back, to wait for another contraction so that the delivery is more controlled. Evidence shows that the rate of tears has fallen from 8% to 3%.

"If these tears are detected immediately and repaired by an obstetrician, problems are a lot fewer. If they're left late, however, a lot of scar tissue develops, and they're much more difficult to repair."

Anne Gulland, London

Cite this as: *BMJ* 2017;356:j1419

We do value EU staff, claims health minister

The government last week sought to reassure physicians fearing an EU exodus, **Abi Rimmer** reports

The government recognises the contribution made to the NHS by workers from the European Union, the minister of state for health has said.

Speaking at the Royal College of Physicians (RCP) annual conference in Manchester last week, Philip Dunne said that EU citizens working in the NHS needed reassurance after the UK's vote to leave the union, and he wanted to assure them that the contribution they make is recognised and valued by the government.

"The government recognises the significant, positive contribution that EU workers are making to our health and social care systems and that's why the prime minister has made securing the rights of EU nationals one of the key principles in the recent white paper on exiting the EU," Dunne said.

"A whole chapter of the white paper was dedicated to this issue. It makes clear that securing the status of EU nationals is a priority for the negotiations once Article 50 is triggered."

Also speaking at the conference, Jane Dacre, president of the RCP, said that it would be a tragedy if EU workers decided to leave the NHS. "Earlier research showed that significant numbers of our European colleagues were feeling at best unsettled and at worst were planning to leave the UK in the next couple of years," Dacre said.

We need the government to provide reassurance that we will be able to keep all of our colleagues

Dunne: "priority" issue

Dacre: Exodus "a tragedy"

"That would be a tragedy. We need the government to provide reassurance that we will be able to keep all of our colleagues; our international medical graduate colleagues and our European colleagues in the NHS and in research."

She added, "There is a lot of talk about home grown doctors but we will not be able to replace the expertise of EU doctors with those who are home grown for many years to come—if ever."

Student numbers

During his speech to the conference, Dunne discussed the government's plan to expand medical student places by 25%. "Last autumn we also took the bold and frankly expensive decision to increase our supply of home grown doctors by up to 1500 places each year, the biggest such single increase in the history of the NHS," he said.

Dunne said that a key aim of the expansion of places was to "widen participation and increase social mobility, providing more opportunities for people to study medicine regardless of race, ethnicity, or background." He added, "We're making an initial increase of 500 additional places across existing medical schools from September next year."

Dunne referred to a consultation launched last week on how the additional medical school places would be allocated as "controversial."

IMPROVING DOCTORS' WORKING LIVES

Health Education England has published a progress report on the work it's doing to improve junior doctors' working lives.

1 Late rota notification

Junior doctors will be given 12 weeks' notice of their placements rather than the previous target of eight weeks. To help them plan their lives better they will also be informed of their rotas with eight weeks' notice rather than six weeks.

2 Flexible training

HEE is proposing a 12 month pilot to reduce the restrictions on higher trainees in emergency medicine who want to apply for less than full time training. It is also considering "non-clinical" days for junior doctors.

3 Rising costs of training

HEE is working with the medical royal colleges to collate the costs of training to increase transparency. It will share its findings with junior doctors and ask the Academy of Medical Royal Colleges to agree principles with regard to exam and course fees.

4 Frequent moves

A working group will explore the rationale behind, and the perceived benefits of, junior doctors rotating through different placements at different sites, from the perspective of employers, trainees, and educators.

"We're taking the opportunity to seek views on ensuring the return for the taxpayer on the investment in the education of our doctors," Dunne said. "Perhaps by expecting doctors to work in the NHS for a few years after graduating—which I am sure will be controversial but already applies to other areas of the public sector, specifically the armed forces where it is widely accepted."

Leadership

Dunne, who previously worked in the Ministry of Defence, also compared the NHS with the military in terms of its leadership culture. He said that, as in the armed forces, more frontline staff, such as doctors, should aim to become senior leaders in the NHS.

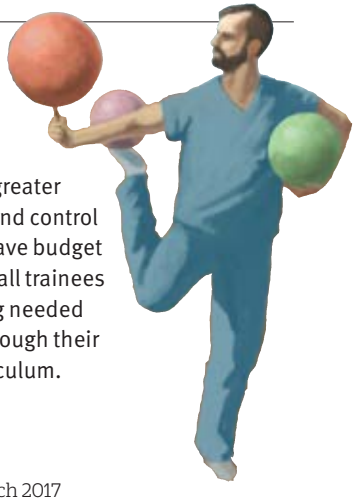
"The entire ethos of the armed forces is predicated on developing leadership skill. The NHS needs excellent leaders at every level," Dunne said. "We know that hospitals that are well led are also more likely to be more productive, report lower levels of bullying and harassment, and provide better care. Some of the most experienced and knowledgeable leaders in the NHS are clinicians but frankly there are far too few undertaking leadership roles and I think we need to change the culture to encourage you to do that."

He added, "That's why we're investing in doctors, nurses, midwives, and allied health professionals who want to take an active role in their organisations. If you think about the armed forces, the entire structure rests on their ability to deliver leaders from within."

Abi Rimmer, BMJ Careers
arimmer@bmj.com

5 Study leave

HEE has developed proposals for greater coordination and control of the study leave budget to ensure that all trainees get the funding needed to progress through their specialty curriculum.



BMA hits out at mandatory NHS service plan for new doctors

Doctors' leaders have criticised government plans that could see doctors being forced to work in the NHS for at least five years after completing their training in England. Ministers proposed the idea in a new consultation on expanding the medical workforce.

Doctors face paying back some of their training costs if they quit the NHS, as part of a "return of service agreement" that could mirror the system used in the armed forces.

England's health secretary, Jeremy Hunt, said that increasing the supply of "home grown" clinicians would help to create a "self sufficient" workforce, easing reliance on agency staff and doctors from overseas. But Harrison Carter, co-chair of the BMA's Medical Students Committee, told *The BMJ*, "Rather than forcing doctors to stay in a profession in which they can see no future, the government must urgently address the reasons why, after years of training to become doctors, fewer people are choosing to apply to or remain in the NHS."

> These proposals do not address the underlying issues that are affecting the NHS's ability to recruit and retain staff

Ministers confirmed NHS plans to train up to 1500 more doctors a year from September 2018-19, a 25% increase on the current 6000 university training places.

The consultation suggests that newly trained medics serve a minimum continuous term in the NHS—options range from two years to more than five—with those who leave early having to repay some fees. Some exemptions would apply, for people on maternity or paternity leave, for example.

Hunt said, "By expanding our supply of home grown doctors and proposing that they serve patients in the NHS for a minimum term, we will ensure taxpayer investment in the NHS is returned.

"While we are proud of our workforce, for too long the NHS has relied too heavily upon locum and agency doctors and superb staff from overseas. All the while budding medics in England are turned away from medical school due to a lack of training places."

Ian Cumming, chief executive of Health Education England, said the 25% increase in places would make the NHS "self sufficient in doctors for years to come" and increase opportunities for young people from diverse backgrounds.

Under the proposals, more training places could be allocated to medical schools that prioritised general practice and shortage specialties. Existing medical schools would provide the first 500 of the additional 1500 places, in 2018-19. A competitive bidding process is proposed for allocating the remaining 1000 places for take-up by the academic year 2019-20 or earlier. This would offer a "direct route of entry to the market for new high quality providers," who are currently being held back, the consultation said.

But Carter said that the government's plan to replicate the scheme in the armed forces failed to take account of the £10 000 a year bursary or £45 000 lump sum that students receive in recognition of their commitment to the military.

Carter said, "While extra medical school places are welcome, these proposals do not address the underlying issues that are affecting the NHS's ability to recruit and retain staff.

"We are already seeing, at each stage of the training process, that fewer people are choosing to apply to or remain in the NHS as doctors, with a poor uptake of places in many specialty training programmes, and a decline in applications to medical school, which these proposals would only worsen."

The consultation runs until 2 June 2017.

Matthew Limb, *The BMJ*

Cite this as: *BMJ* 2017;356:j1370

THE BIG PICTURE

Stickman and me

A photograph representing the artist's relationship with Crohn's disease has won the 2017 Wellcome Image Award.

Stickman—The Vicissitudes of Crohn's, by the artist and illustrator Spooky Pooka (Oliver Burston), is one of a series of images based around Stickman, the artist's alter ego.

Through Stickman's skeletal body, made of sticks rather than bones, the artist seeks to show the weight loss and fragility associated with Crohn's disease, as well as its abrupt, transformative nature.

Fergus Walsh, BBC medical correspondent and a member of the judging panel, said, "This image is a stunning representation of what it must be like to have Crohn's disease, and it's like nothing I've seen before in terms of the portrayal of someone's condition: it conveys the pain and torment the sufferer must go through.

"The image really resonates and is beautifully composed: it's a haunting piece."

The winning image is one of 22 chosen to showcase the best in science pictures. Other images include an illustration of the Nobel laureate and neurobiologist Rita Levi-Montalcini, and a patient receiving outpatient treatment at an eye clinic in India.

The images will be on display in nine museums and galleries in the UK, as well as galleries in the Republic of Ireland, Russia, and South Africa.

To see all of the winning images go to www.wellcomeimageawards.org

Anne Gulland, London

Cite this as: *BMJ* 2017;356:j1433

DARIA KIRPACH: **Portrait of Rita Levi-Montaicini**

SUSAN SMART: **Kalinga Eye Hospital in India**

SPOOKY POOKA: **Stickman—The Vicissitudes of Crohn's (Resolution)**

E-HEALTH

Hospitals play catch up for a digital NHS

Stephen Armstrong explores how the NHS is putting its hopes—and maybe some money—into a handful of hospitals to work out how to go fully digital

IBM's Watson is one possible future for healthcare. It's an augmented intelligence with natural language abilities—a constantly learning supercomputer that can read the latest research journals, examine patient referral letters, comb through records, dissect patient hereditary and medical history, and recommend courses of treatment. It is already being used for cancer patients in India and the US, but the company has yet to strike a deal with any NHS units. In part, this is because many NHS hospitals are simply not able to connect Watson to their creaking IT systems, which can't even talk to each other.

As the NHS speeds towards a government mandated paperless world by 2020, hospitals are proving a stumbling block. Almost every general practice had 100% digital systems over a decade ago but hospitals lag far behind. In late 2015, all 239 NHS trusts and foundation trusts assessed their digital capabilities, revealing that "information in acute trusts is less digitised and less structured and they are less able to share information digitally" than primary care. There was a slightly improved picture among community trusts, and mental health trusts "seem further ahead."

In September 2016 NHS England named 12 hospitals—including Wirral University Teaching Hospital NHS Foundation Trust, Oxford University Hospitals Trust, University Hospitals Birmingham NHS Foundation Trust, and University Hospitals Southampton NHS Foundation Trust—as "digital exemplars," hospitals that already operate electronic patient records and are intended to be the first NHS trusts to be entirely paper free.

Each exemplar will receive £10m to invest further in digital infrastructure and specialist training, including wi-fi for patients and NHS staff, real time video links between ambulances and emergency departments, and electronic detection of patient deterioration.

Expanding what works

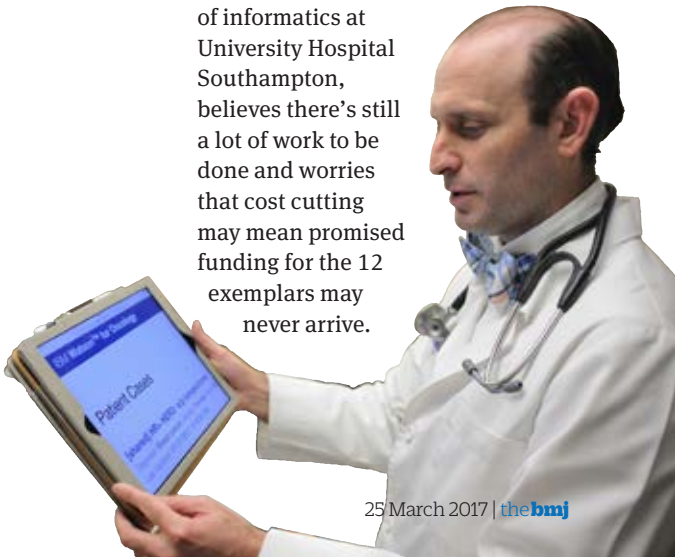
University Hospitals Birmingham, for instance, currently operates a patient portal, MyHealth@QEHB, which connects 13 000 users to their healthcare records online. Oxford is building a trust-wide system to replace bedside paper charts with tablet computers and a barcode system to ensure the correct blood is transferred, and Wirral is planning a population health management system, combining and sharing all the data held by the different health organisations in the area. The £10m is intended to cover further projects, providing model examples for the rest of the secondary care system to learn from and copy.

> Every hospital has already got a lot of different systems they can't afford to throw out

At Healthcare UK's Towards the Digital Hospital conference in February, Amir Hannan, the GP who took over Harold Shipman's practice in Hyde, Greater Manchester, explained how he saw digital access as vital in rebuilding patient trust. New patients get a one hour appointment where Hannan creates their personal account and shows them how it works. Currently over 6600 patients—55% of the practice total—have full access to their GP record.

"There needs to be a similar huge education programme for hospitals, for staff as well as patients," Hannan believes.

Adrian Byrne, director of informatics at University Hospital Southampton, believes there's still a lot of work to be done and worries that cost cutting may mean promised funding for the 12 exemplars may never arrive.



A BRIEF HISTORY OF IT IN THE NHS

Computers have been used in the NHS since the 1960s, beginning in 1968 with the patient administration system (an electronic filing system to keep track of appointments). And in 2002, after a meeting between the prime minister and then chief executive of Microsoft, Bill Gates, the NHS began developing the ambitious National Programme for IT.

This was the world's biggest civil information technology programme, including the ability to transfer radiology images and prescriptions electronically and the option for patients to have access to their records online through a service called HealthSpace. When the scheme was launched, the Wanless review estimated it would cost £2.2bn in 2003-04, peaking at £2.7bn in 2007-08. By the time it was scrapped in 2011 it had cost around £10bn and was still years from completion.

HERITAGE IMAGE / ALAMY

"The exemplars were suggested by Professor Bob Wachter in his report on digitising hospitals last year," he explains. "He also said that paperless by 2020 was tricky to achieve—he suggested 2023, and even then he thought it would need more than the £4.2bn the government has put aside."

Byrne and Hannan agree that investment in digitising hospitals is crucial. "Every hospital has already got a lot of different systems they can't afford to throw out—legacy systems, sometimes for the right reasons, sometimes because there's five years left on the contract," explains Sean Brennan, director at Clinical Matrix, a healthcare informatics consulting firm.

Patient focus

The digital exemplars programme is the government's replacement for the old national IT programme—built around the digitisation of patient records, with interoperability and national standards at its core. The benefits of a connected, digital patient record system would be huge, argues Cosima Gretton, teaching fellow at University College London. She works with RADAR-CNS—a pan-European consortium of academic organisations, hospitals, and drug companies developing digital predictors of relapse in depression, multiple sclerosis, and epilepsy that can work on smartphones and other devices.

"These are conditions that are very hard to manage with long term needs," she explains. "You get single instant contact with a clinician—you may have relapsed a week ago but you're feeling better now and no-one was there at the time. With wearables and smartphones patients can monitor their biomarkers all the time. That should link hospitals and primary practices—it helps the patient's GP manage and support them remotely but connects directly to hospital consultants."

Primary care providers are leading the way. Since April 2014, the percentage of general practices in England allowing patients to access their summary care record, book appointments, and order repeat prescriptions online has increased from 3% to 97%, although patient uptake is low with only 0.9% of patients using this service and just 0.1% of patients having access to their full GP record online.

For patient advocate Dave de Bronkart, a Boston based cancer survivor who blogs and speaks about patient empowerment and provided advice for the Wachter report, digital hospital records work best for patients if they have online access to every part of their record.

"When we see that a piece of information doesn't make it from hospital A to hospital B—or doctor A to doctor B—it's not just a problem for the patient, it's a problem for the doctor," he argues. "Practically it's very hard to give any particular hospital or doctor responsibility for all the compiling of any patient's records from all possible sources. The best thing to do is let me the patient be the aggregator of all my records. Using an app—similar to a banking app—I can see new information and ensure that my GP, oncologist, and any other clinicians I see have my latest report."

Problems remain, argues Brian Power, lead informatics pharmacist at the Wirral University Teaching Hospital NHS Foundation Trust. There are concerns about privacy and data security—most notably for locums since many hospitals issue new locums with the same log-in as their predecessor. But these problems need to be resolved soon, says Byrne: "The only way you're going to reduce NHS costs by £30bn is by keeping people out of hospitals," he argues. "Linking patients with primary and secondary care and letting information transfer rather than simply be read is going to make a huge difference."

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EDITORIAL

Cost effective but unaffordable: an emerging challenge for health systems

New "budget impact test" is an unpopular and flawed attempt to solve a fundamentally political problem

With hospital wards overflowing and trusts in deficit, the introduction of cost effective but expensive new technologies places increasing strain on NHS finances. The National Institute for Health and Care Excellence (NICE) and NHS England plan to tackle this problem by delaying the introduction of interventions with a "high budget impact."[1] The change may deliver short term savings but is flawed.

What prompted the new policy? In 2015 NICE recommended the use of several new drugs for hepatitis C.[2] Although they were judged clinically useful and cost effective, NHS England considered them unaffordable, with annual costs of between £700m and £1bn, and delayed adoption.[3 4]

Patient access to some new technologies will be substantially slowed

Affordability

From 1 April 2017, the current requirement to fund NICE recommended technologies within 90 days will not apply for those with annual costs that exceed £20m.[1] Instead, NHS England will be granted up to three years—longer in exceptional circumstances—to conduct commercial negotiations.[1] As a result, patient access to some new technologies will be substantially slowed.

The policy brings affordability into NICE's remit in an unprecedented way. To date, NICE has based its recommendations on an ethics of opportunity costs.[5] New technologies are judged principally on their incremental cost effectiveness ratio, a measure of their cost effectiveness compared with existing interventions. Judgments sometimes reflect broader social and ethical values, but cost effectiveness is normally the main consideration.[5]

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Slow tracking

The budget impact test means that technologies costing the NHS more than an additional £20m a year will be "slow tracked," regardless of their cost effectiveness or other social or ethical values. This risks undermining the existing opportunity costs framework. Consider infliximab, currently recommended for both acute exacerbations of ulcerative colitis and severe active Crohn's disease.[6 7] Its list price is the same across indications, but the total cost of treating the handful of eligible patients with ulcerative colitis is far lower than that of treating the 4000 eligible patients with Crohn's disease. Under the new approach use for Crohn's disease would probably fail the budget impact test, delaying introduction; use for ulcerative colitis would not.

Budget impact is essentially the price per patient multiplied by the number of patients treated. Yet the prevalence of someone's condition should not determine their access to treatment. The principle of equity means that like cases should be treated as like; the NHS Constitution requires the NHS to respond to the clinical needs of patients as individuals.[8 9] The new test requires NICE to treat patients in one group less favourably than those in another solely because there are more in the first group than the second. It is numerical discrimination. And if large numbers of patients experience delays, the policy threatens widespread harms.

Transparency and disinvestment

Affordability is driven by public expenditure, a fundamentally political matter. NICE and NHS England should be commended for seeking to square the circle on affordability when the current government's response is inadequate. Perhaps the policy aims to pressurise industry to lower its prices when volumes are high. But this is to use large patient groups as a bargaining chip.

NICE's justification for pursuing its approach—that "no alternative solutions" have been put forward—is invalid in our view.[1] The recent consultation did not ask for other options. Had it done so, several could have been canvassed. NICE's methods assume that the NHS will pay for new cost effective interventions through disinvestment, removing existing treatments that are relatively cost ineffective. This rarely happens.[10 11] A systematic and transparent programme of disinvestment, though difficult, could increase the resources available to fund new technologies. An increase in the NHS budget would, of course, help too. But even without that, NICE's cost effectiveness threshold could be updated for all technologies, so treating patients equitably.[12] More widespread use of risk sharing on costs might also help to reduce total budget impact. Or, most controversially, the 90 day funding requirement for NICE approved technologies could be removed entirely and the power to make decisions about affordability given back to politicians or NHS England.

Even if it is no longer feasible politically for NICE to ignore overall affordability in individual technology appraisals, budget impact could be a special consideration, modifying the cost effectiveness calculation alongside other social or ethical values. The recent consultation should have marked the start, not the end, of a more substantial debate about the role of affordability in the NHS. It is not too late to correct this mistake.

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EDITORIAL

Industry links with patient organisations

A healthy relationship is possible if based on integrity, independence, accountability, and transparency

Are patient organisations overly influenced by industry funding? Two recent articles give fresh currency to a perennial debate. The first is a survey of a sample of leaders of patient advocacy organisations (439 surveyed, representing 5.6% of 7865 identified US patient advocacy organisations). The authors found that although most of the 289 organisations that responded reported modest industry funding, a minority had substantial support, raising concerns about their independence. Survey respondents acknowledged a need to improve conflict of interest policies.[1] A second study of 104 patient advocacy organisations found similar funding patterns and that only 12 had published policies for managing institutional conflicts of interest.[2]

Mission driven organisations

Nobody disputes that funders of all types—regardless of whether they are from the public or private sector—can bias those in receipt of funding. There are well understood and researched risks for health professionals, researchers, and patient organisations alike. But to suggest on the basis of such surveys that patient groups are not sufficiently representing the interests of patients and citizens, as a linked opinion piece by Moynihan and Bero argues,[3] is overdone. Nor is their proposal that patient groups should "ultimately disentangle" themselves from industry realistic in a health sector increasingly characterised by collaboration between public, private, and non-profit organisations.

Patient groups are diverse, but all are mission driven organisations trying to improve outcomes for particular groups of people. They can and should seek out appropriate relations with a range of partners, including industry. Funding is an important component of their activity, with the potential to do a great deal of good.

Patient organisations cannot be blamed for taking an interest in medicines. But many have a much wider role, ensuring that people get proper information and advice, a voice in their own care, practical and emotional support, and responsive and coordinated services. A cancer charity might take as much interest in housing, welfare, and employment as in cancer drugs. Viewing the non-profit sector in health and care only through the lens of medical treatment is a misunderstanding.

On the other hand, patient groups cannot plead that simply because they represent patients or have non-profit status that they are necessarily the good guys. Complacency serves only to fuel the criticisms levelled at them. The onus is undeniably on the organisations to demonstrate that they are well run in the interests of patients and the public.

Good leadership and strong governance are essential. Codes of conduct and guidance already exist for deciding when and how to work with industry and when not to. These highlight common values and principles, including clarity of purpose, integrity, independence, accountability, and transparency. They also provide examples of how such principles can be put into practice.[4-7]

Patient organisations should seek a diversity of funding sources and consider each on its merits

Transparency is key

Patient organisations should seek a diversity of funding sources and consider each on its merits. All funding sources should be declared publicly along with the purpose for which money has been received. Conflicts of interest must be managed robustly and transparently, and all policies about funding and dealing with conflicts of interests made available to donors, supporters, and the public. Those who observe best practice have a stout defence of their conduct. Those that do not have few excuses.

Umbrella coalitions of patient organisations, such as England's National Voices, are well placed to encourage and support their members to follow published guidance and codes of conduct and to evaluate and review practice.

In addition, patient organisations should challenge themselves to ensure that patients have a strong role in how they are run and the decisions they take.

They should not be put off responsible working with industry for fear of guilt by association. Equally, each organisation must decide its own position on funding, and that will include—for some—refusing all funding from industry. Meanwhile, there are some signs that industry is seeking to work in a more open and constructive way with patient groups, although, by its own admission, it still has a great deal to learn.[9] Successful collaborations will be able to demonstrate a clear purpose that benefits patients and ways of working that are based on the principles of integrity, independence, accountability, and transparency.

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PUBLIC HEALTH

Is the government still serious about reducing smoking?

The lack of a tobacco control plan in England since 2015 could damage recent gains in reducing prevalence, **Sophie Arie** reports

REX

On 20 May, the UK is set to take a huge stride in efforts to stop people smoking. It will become the second country in the world, after Australia, where cigarettes can be sold only in standardised, plain packaging.

Yet at the same time, concern is growing that the current government is letting other crucial tobacco control policies slip, policies that have greatly reduced the prevalence of smoking in recent years.

Since 1998, successive governments have put in place consecutive plans for tobacco control measures in England—from legislation and taxation to increasing public awareness of the harm caused by smoking and helping people to quit. Under those plans, smoking prevalence among adults has dropped by over a third, from 28% to under 18% in 2015. Smoking among young people fell from 11% in 1998 to 3% in 2014.

Yet the last plan expired at the end of 2015 and has not been replaced.

"This suggests either that there is opposition within government to further action on reducing smoking prevalence, or that the issue is not being given the priority it deserves," said the All Party Parliamentary Group (APPG) on Smoking and Health in a report in January.

The government has repeatedly said that it will publish a new plan soon, but when urged to stop saying "shortly" and commit to a date during a recent debate, the undersecretary of state for health, Lord O'Shaughnessy, said that he would use synonyms for shortly next time he was asked.

Some antismoking campaigners suspect the delay may be the result of the government's focus on Brexit and on tackling immediate problems in the NHS that get more publicity, such as the pressure on emergency departments. "The urgent always trumps the important," says Deborah Arnott, chief executive of Action on Smoking and Health (ASH).

28% to under 18%

Drop in smoking prevalence, 1998-2015, when the last strategy expired

But some doctors, including Nick Hopkinson, reader in respiratory medicine at Imperial College, London, are concerned that when it finally is published, the new plan "will have been watered down," as happened with the government's obesity strategy published last year. Hopkinson organised a letter, published in *The BMJ* in January and signed by more than 1000 doctors, including heads of royal colleges and public institutions, calling on the prime minister to publish a plan.

"The government must decide whether it values the freedom to smoke more highly than the freedom to breathe fresh air," he told *The BMJ*. "We need new and challenging targets to reduce smoking levels in all groups in society and a strategy across government for how to deliver this," said Hopkinson.

Specialist smoking cessation services, until recently a universal offer, are now provided by only three quarters of upper tier local authorities

Cuts to campaigns

Instead though, the government has confirmed that the budget for mass media antismoking campaigns will continue to fall (from £25m in 2010 to less than £4m in 2016-17) despite evidence they are highly effective. And amid intense fiscal pressures, smoking cessation budgets were cut in 59% of surveyed local authorities in 2016-17 (with 39% of local authorities having already cut them in 2015-16), according to research by ASH for Cancer Research UK.

Budgets for wider tobacco control measures, including enforcing trading standards, campaigns, and tackling the illicit trade, were cut in 45% of local authorities in 2016-17 (and 28% of local authorities in 2015-16).

Stopping cessation services

Specialist smoking cessation services, until recently a universal offer, are now provided by only three quarters of upper tier local authorities (county councils) in England. And several clinical commissioning groups have asked GPs to stop prescribing nicotine replacement therapy to save money.

"This dangerous development threatens to slow or even halt the long term decline in smoking prevalence and urgently needs to be reversed," said the APPG in its January report.

An effective collaboration of 12 local authorities in northeast England is threatened because its almost £1.2m contract is up for renewal on 31 March. A similar collaboration in the north west will end on 31 March, as did its equivalent in the south west last year, because of lack of funding.

"They have no choice," Arnott says. "Which is why we're still pushing for a mechanism to make the tobacco industry pay."

The APPG, anti-tobacco campaigners, the BMA, and leading doctors, support an annual "polluter pays" levy on tobacco companies. ASH suggests this could generate £500m annually. The government agreed in a 2014 Treasury statement that it was "fair to ask the tobacco industry to make a greater contribution," but after the 2015 election decided not to proceed.

Sophie Arie is a freelance journalist, London

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DIGITAL HIGHLIGHTS

Making doctors serve their time

Last week the Department of Health launched a consultation on plans to train up to 1500 more "home grown" doctors a year from September 2018—a 25% increase on the current 6000 university training places. One of the proposals set out in the consultation is for newly trained medics to serve "a minimum term with the NHS." Options range from two years to more than five—with those who leave before this time having to repay some of the fees. The idea has been met with criticism by doctors' leaders (*BMJ* 2017;356:j1370) and has faced its share of scorn on Twitter too. Here are some of the responses:

Helen Fidler @drhfidler
Becoming a doctor is a privilege, but that does not justify conscription

Azeem Majeed @Azeem_Majeed
England needs an NHS in which doctors want to work, not an NHS in which they are forced to work

Riyaz Shah @DrRiyazShah
This is a v dangerous idea and an open acceptance that things are utterly desperate at DOH

MH-worker @MH_worker
@JeremyHunt is determined to drive existing staff & potential away. Can't recruit as is without this threat

James Edwards @JDEdwards86
All I can say is thank heavens I've done my five years. My thoughts: no thank you

Kat Arandjelovic @KArandjelovic
If working conditions were any good, they wouldn't need to be forced

Dr Thurairajah @RubenThurairaj
Next will be an order by Hunt that each family give a child to the NHS

Rachel Clarke @doctor_oxford
You really think doctor conscripts would be safe, Mr Hunt? How about addressing why we are being driven away

Luke Austen @lukeausten
Could work, but only if med degrees are funded i.e. not leaving with › £60k loan

Amit Bali @amitkbali
From experience (S Africa), mandatory periods like this drive more people away. Must look at underlying reasons for attrition instead

David Shepherd @davesheph
Unintended but entirely predictable consequence will be more applications to law, engineering, anything but medicine

theveindoc @theveindoc
[In reply to @davesheph] Be realistic. There will always be plenty of bright willing applicants to med school

Ciara NíDhomhnaill @ciaraaod
This is outrageous; they're junior doctors, not prisoners

Chris Bidder @drbidz
Can you imagine how much more dangerous the junior contract would be if this was enacted?

Jim Crawfurd @jim_crawfurd
I guess at least that implies they are committed to keeping the NHS going for ›5 yrs . . .

Mr Anonymous @WLancsGP
[In reply to @jim_crawfurd] That should read +5yrs slavery to Virgin et al

Fi Douglas @fidouglas
If we're forced to work for 5 years, we should at least have our training paid for like military docs do

TALES FROM THE ARCHIVE

The long march to equality

On this day in 1965, civil rights activists led by Martin Luther King Jr successfully completed their four day march from Selma, Alabama to the state capitol of Montgomery. By the march's end, it was estimated that over 30 000 people had joined the protest against barriers to voter registration for black citizens. An earlier attempt to complete the march on 7 March saw those marching attacked by state troopers armed with clubs and tear gas.

More than 50 years later, King's speeches about the struggle for equality still hold power and relevance—especially in healthcare. In a 2012 BMJ Opinion article (bmj.co/luther_king2012), Tracey Koehlmoos highlighted how "in some areas, such as education, achievement, and health status, disparities continue to exist." As she points out, King "made many inspirational statements that ring true today in the US and in the far corners of the planet, like Bangladesh." More particularly, King's observation that "All life is interrelated . . . Whatever affects one directly, affects all indirectly" has been taken up in the medical community—including in articles in *The BMJ*—as an expression of the interdependent nature of global health and the need for unified efforts to improve health.

ILLUSTRATION: DUNCAN SMITH

Azeem Majeed, 55, is professor of primary care at Imperial College London, as well as working part time as a GP in Clapham. He qualified in Cardiff and worked at St George's Hospital Medical School and University College London before going to Imperial in 2004. His research and writing focus on what works in primary care and how to make it work better. What doesn't work very well is the "health MoT" for middle aged people, as a study he coauthored last year found. He tweets often (@Azeem_Majeed). Examples: "NHS winter pressures are predictable. Attempts to apportion blame for these pressures onto any professional group—such as GPs—are wrong."

BMJ CONFIDENTIAL

Azeem Majeed
No part timer

What was your earliest ambition?
As a boy I was keen to be a pilot. My poor eyesight put an end to that ambition.

Who has been your biggest inspiration?
Two of my former consultants, James Stuart and Keith Cartwright, who mentored me early in my career, helped me write my first scientific papers, and started me on my academic career path.

What was the worst mistake in your career?
Early in my career I admitted a man who had undergone some changes in behaviour after a minor head injury. I did not consider ordering a CT scan immediately, but fortunately my senior registrar did, and a diagnosis of a subdural haematoma was made. The patient had surgery and a good outcome.

What was your best career move?
Moving to London in the 1990s to take up my first academic post. Although I was unsure about moving to such a large city, working in London opened up many professional and academic opportunities to me.

Who is the person you would most like to thank and why?
My wife, for supporting me in my personal and professional life.

To whom would you most like to apologise?
The patients in my medical practice. As an academic GP I see them only one day a week, and many think I work only part time. I can assure them that I work full time.

If you were given £1m what would you spend it on?
Education is the key to development, so I would use the money to support university scholarships in a low income country.

Where are or were you happiest?
On holiday with my family in Pembrokeshire, which I visit regularly.

What single unheralded change has made the most difference in your field?
The internet and the rapid and easy access to medical information it has made possible for patients, clinicians, and academics.

Do you support doctor assisted suicide?
No.

What book should every doctor read?
The Citadel by A J Cronin. Though it was published in 1937, its core messages are still relevant to doctors. For a non-medical book I would recommend *The Conquest of New Spain* by Bernal Diaz del Castillo, a fascinating contemporary account of the overthrow of the Aztec empire by the Spanish and their local allies.

What is your pet hate?
Politicians who do not base policy on evidence.

What would be on the menu for your last supper?
A salmon starter, roast chicken with vegetables, and bread and butter pudding.

Do you have any regrets about becoming a doctor and an academic?
No. I am very grateful that I have had the opportunity to be an academic doctor. Being an academic and a clinician opened a tremendous career path for me.

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