Kenneth Arrow died in February 2017 in California, aged 95. The most important economist you’ve probably never heard of, he was the youngest economist to win a Nobel prize and is widely lauded as “one of the most brilliant economic minds of the 20th century.”

Searching for traces of how healthcare has been organised—or not—in the UK, I read his seminal 1963 paper, *Uncertainty and the Welfare Economics of Medical Care*. In it he wrote, “The special economic problems of medical care can be explained as adaptations to the existence of uncertainty in the incidence of disease and the efficacy of treatment.”

It’s a beautifully written piece, such that a non-economist can appreciate it. I asked whether I could interview him by phone and email for *The State of Medicine*, a book I was writing. He was a delight. His slow, dignified American drawl was full of considered, urbane insight.

He still held the view that medical care can’t be delivered through a market approach in the same way as other goods and services. Doctors are meant to offer care “dictated by the objective needs of the case and not limited by financial considerations.” But information held by insurers, doctors, and patients is always unequal. And, crucially, it’s expected that doctors’ concern “for the correct conveying of information will, when appropriate, outweigh their desire to please their customers.”

I asked him whether this would change as medical information becomes more widely available. What about the internet revolution? What about “rate my hospital” and “rate my doctor” websites? Don’t they create the information equilibrium needed to make healthcare marketable?

He laughed down the phone. They pose some big problems, he explained: “In practice, the theoretical advantages of choice are outweighed by the fact that people don’t do a good job of making these choices in a competitive environment—it’s almost impossible.”

Competitive markets mean that information becomes commercial: we are advertised to, not advised. A competitive healthcare market is grounded in the expectation that some hospitals or surgeries will go bust. Instability is normal, so hospitals or GP surgeries will fold in the normal course of events. Such markets work well for groceries: if a supermarket closes you can get your carrots elsewhere. But healthcare isn’t a comparable transaction, he argued. Changes in professionals are “deleterious to an ongoing relationship.”

Arrow was an economist who knew that human care was not readily appreciated on spreadsheets. I told him about the uncontrolled ideological experiment in the UK—how NHS England had decided to marketise healthcare and how the devolved nations had disagreed. I told him about the resources sacrificed to create a market that wasn’t needed.

He was perturbed: “We looked to the NHS to see how it should be done.”

“There’s always Scotland,” I said.

Margaret McCartney is a general practitioner, Glasgow
margaret@margaretmccartney.com
Follow Margaret on Twitter, @mgtmccartney
Cite this as: BMJ 2017;358:j3223
PERSONAL VIEW
Lucinda Hiam

Grenfell survivors shouldn’t be afraid to go to hospital

Immigration and healthcare are separate issues, and denying medical treatment to deter immigration is inhumane.

In the wake of the Grenfell Tower fire, we have all been confronted with the reality of inequality in this country. The consequences of public sector cuts have been discussed at length. The political determinants of health and the need for public health professionals to “make the invisible visible” have been highlighted.

Yet the plight of the undocumented migrants and asylum seekers living in the tower has, so far, received very little attention.

Volunteer medics helping Grenfell survivors have reported that many are not going to official relief centres or the NHS to get help, even if they have serious injuries, because they fear being referred to Home Office immigration teams. This is an issue which is playing out across the UK, with grave consequences.

There are more than 500,000 people without resident status living in the UK, mostly in large cities, who face multiple barriers in accessing the healthcare they need. They might be domestic workers on very low pay, or failed asylum seekers who’ve been left destitute.

Doctors of the World runs a clinic in Bethnal Green in east London for excluded people. Here, we see heavily pregnant women who have had no antenatal care; people with serious illnesses, such as cancer and diabetes, who have had no contact with a doctor; and parents with sick children who avoid taking them to see a GP. Many are simply too afraid to go to a GP even if we can help them to register. Sadly, their fears are not unfounded.

A controversial deal between NHS Digital, the Department of Health, and the Home Office means it is now routine for immigration enforcement teams to use NHS patients’ private records to obtain details such as home addresses. According to the Department of Health, the Home Office made 8127 requests for NHS patients’ data in the first 11 months of 2016 alone. This led to 5854 people being traced by immigration teams.

Alarming consequences
The consequences of this deal are seen in our clinic with alarming regularity. In January, a woman presented to our clinic in labour, having been too...
Leaving medicine—is the grass always greener?

ACUTE PERSPECTIVE

David Oliver

The consistently top the poll of public valued and supported. But they won't. Some may make staff feel better than the NHS, albeit without its stresses alongside the promise of business bring a different set of Self employment and start-up started those careers much younger. playing catch-up with people who or the drug industry. But they'd be management consultancy, finance, lucrative niche work applying their academic ability to retrain in technology, industries whose key drivers are human contact that medicine professional satisfaction, fulfilment, respect, as healthcare professionals do. Nor will they necessarily offer the professional satisfaction, fulfilment, and human contact that medicine can. And the personal values that drew many into careers as NHS doctors could seriously jar with industries whose key drivers are profit and competition. I'd never judge any doctor for leaving. I'd only urge those eyeing the exit door, from what has come to feel like a bleak house, to consider whether the grass really is greener outside. David Oliver is a consultant in geriatrics and acute general medicine, Berkshire davidoliver372@gmail.com Follow David on Twitter, @mancunianmedic

Cite this as: BMJ 2017;358:j3254

is dying slowly. Doctors have the academic ability to retrain in other learned professions such as accountancy. A proportion could find lucrative niche work applying their medical backgrounds to technology, management consultancy, finance, or the drug industry. But they’d be playing catch-up with people who started those careers much younger. Self employment and start-up businesses bring a different set of stresses alongside the promise of freedom and flexibility. Some corporate employers may pay better than the NHS, albeit without its job security and pension entitlement. Some may make staff feel better valued and supported. But they won't consistently top the poll of public communities that will not be dispelled by vague assurances. We have written to Jeremy Hunt, the health secretary, and local NHS hospitals, urging them to publicly state that survivors will not be subject to identity checks or hospital bills or have their details shared with the Home Office.

StopSharing campaign

Since the spring, we have also been campaigning hard against the Home Office’s deal with NHS Digital. Our #StopSharing campaign is bringing together hundreds of NHS medics to oppose the use of patients’ records to track down and arrest migrants. We hope that the days of this unethical data sharing deal, which was made without consultation with NHS staff, are numbered. Last week the BMA joined the chorus against the deal, with its members voting overwhelmingly against the Home Office accessing NHS data in this way. Public Health England has also voiced serious concerns about the agreement.

Immigration and healthcare are separate issues, and denying people healthcare in a bid to deter immigration is inhumane. For the survivors of such a huge tragedy to be too afraid to go to a hospital is a truly shameful situation.

Lucinda Hiam is a GP and health adviser, Doctors of the World

Cite this as: BMJ 2017;358:j3292

is inhumane. For the survivors of such immigration and healthcare are separate issues, and denying people healthcare in a bid to deter immigration is inhumane. For the survivors of such a huge tragedy to be too afraid to go to a hospital is a truly shameful situation.

Lucinda Hiam is a GP and health adviser, Doctors of the World

Cite this as: BMJ 2017;358:j3292

Treating the spiritual needs of patients in end of life care

“"In the last moments of her life, my mother was not worried about whether her chemotherapy was working or not, but whether her life had meaning.”

A moment of silence followed the young man’s admission. He was invited as a guest speaker to a seminar on spirituality and healing in medicine—A Harvard Medical School course designed to engage young healthcare providers in their role in the last transition of life: from sickness to death.

Should doctors engage in conversations about life, death, and dying only when it pertains to clinical matters? Or is spiritual care part of a physician’s duties? And, if it is, can physicians use this understanding to enhance end of life care?

After years spent immersed in scientific inquiry and using evidence based medicine, it is easy to forget that many of our patients place a significant amount of trust in—and derive comfort from—faith, religion, or spirituality. Indeed, research has shown that patients reported dissatisfaction with the quality of care they received when their attending doctors did not ask about their spiritual needs or discuss what dying might be like. It is important to recognise that spirituality does not necessarily mean affiliation to a particular religious doctrine; it can also mean a set of beliefs that help patients find meaning and purpose in life and achieve peace at the end of it.

One of the tenets of high quality medical care is the provision of comfort

One of the tenets of high quality medical care is the provision of comfort, so when physicians fail to acknowledge their patients’ spirituality, an important opportunity is lost. Recognising this need doesn't have to mean taking part in lengthy theological discussions: keeping an open mind during conversations and exploring what spirituality means to your patient is a good start. You could ask questions such as, “What can we do to support your spiritual needs?” Meeting this need doesn't always take the form of doctor-patient dialogue, either—it can be purely practical and involve making sure patients have access to certain resources. Chaplaincy services could be offered, for example, or even simply books or music.

In his final book, Paul Kalanithi reflected on his transition from a healthy neurosurgeon to a patient dying from cancer. He describes how important—and comforting—it was for him to have doctors who helped him to confront his mortality in the final days of his life. It is appropriate parting advice from a fellow physician on how medicine, with all of its modern complexities and evolving technologies, is still an art. Junaid Nabi is a post-doctoral researcher in surgical health services at Harvard Medical School.
Cybersecurity and healthcare: how safe are we?

The threat of online attacks require policy makers to tackle fragmented governance, to develop and implement security standards, and to help organisations to improve resilience, say Guy Martin and colleagues.

Healthcare systems around the world have rightly identified the huge potential for digital technology to improve clinical outcomes and transform care delivery. But the recent WannaCry malware attack has once again highlighted cybersecurity as a critical patient safety issue requiring urgent solutions.

A global challenge

Cyberattacks usually steal money, data, or intellectual property, but increasingly the aim is to cause disruption or political impact. They are often transnational and state sponsored; attributing them to individuals is difficult. Many attacks are undetected or unreported, and only a small minority enter the public domain; among recent examples are the major breaches at TalkTalk, Mossack Fonseca, the US Democratic National Committee, and Yahoo. The global cost of cybercrime in 2014 was estimated to be $575bn (£440bn).

Cybercrime and healthcare

Healthcare faces even larger cyber risks than other sectors because of inherent weaknesses in its security posture. It is one of the most targeted sectors globally; 81% of 223 organisations surveyed, and more than 110 million patients in the US had their data compromised in 2015 alone.

Only half of these providers think that they are capable of defending themselves from cyberattack, and there has been a 300% increase in attacks in the past three years. For those conducting cyberattacks the healthcare sector is an attractive target for two simple reasons: it is a rich source of valuable data, and it is a soft target. The current and emerging cyber risks to healthcare are outlined in box 1.

The healthcare sector is usually targeted for financial gain; cybersecurity aims to protect the confidentiality, integrity, and availability of valuable healthcare data. Protecting confidentiality means ensuring that sensitive information, especially identifiable data, does not reach the wrong people. In 2015 criminals stole 80 million records from Anthem, a US health insurance company. Given that individual medical records are traded on the “dark web” for around $50, this breach had a market value of a billion dollars or more. Medical records, especially those in the US, are worth much more on the black market than credit card details because they contain multiple permanent identifiers and financial information. Unlike credit cards, these identifiers cannot be reset, and a person’s records might contain enough information to open bank accounts, obtain loans, or acquire a passport. Protecting integrity means ensuring the accuracy and trustworthiness of data, and protecting availability means maintaining reliable access to the data and to the systems used to process and store the data.

The fallout from the global WannaCry ransomware attack in May 2017 is still settling; it reportedly affected around 200 000 systems in

Box 1 | Common and emerging cyber threats in healthcare

Data theft for financial gain—stealing personal data for the purposes of monetary gain; for example, names, addresses, social security details, financial information

Data theft for impact—steal and public release of sensitive medical information; for example, celebrities, politicians, or other high profile people

Ransomware—using malware to block users from their data or systems or to delete data unless a fee is paid

Data corruption—deliberate corruption of data, such as altering test results, for political or personal gain

Denial of service attacks—disruption of a network or system by flooding it with superfluous requests, motivated by blackmail, revenge, or activism

Business email compromise—creating fake personal communications for financial gain; for example, obtaining fraudulent payments or personal information

The unwitting insider—substantial disruption to systems or the loss of data owing to the unintentional actions of staff using outdated and at-risk systems
Hospital and hospitals in Germany have also been targeted.\textsuperscript{11} Freedom of information requests in the UK found that in 2015-16 up to half of NHS trusts were hit by ransomware in the preceding year.\textsuperscript{12} Despite these well publicised attacks and the availability of security patches, the warnings went largely unheeded resulting in the major disruption caused by WannaCry.

Although the healthcare sector is usually targeted for financial gain, other motives have also been reported. In 2016 1.28 million records from the Australian Red Cross Blood Service that contained large amounts of sensitive information, including donors’ at-risk sexual behaviour, were posted on a public website for no clear motive but to expose security flaws.\textsuperscript{13,14}

Cyberattacks are also used for political impact—most notably in the recent attacks against the World Anti-Doping Agency, in which the medical records of prominent athletes were released.\textsuperscript{15} Hackers linked to the militant group Islamic State have directly targeted NHS websites for propaganda purposes.\textsuperscript{16} Other scenarios in which high profile people are targeted to damage their reputations are easy to imagine.

**Why is healthcare so vulnerable?**

The vulnerability of healthcare to cyberattack reflects a combination of factors, notably limited resources, fragmented governance, and cultural behaviours. Compared with other sectors, such as financial services, healthcare has chronically underinvested in information technology (IT) infrastructure. Many NHS organisations spend as little as 1-2% of their annual budget on IT, compared with 4-10% in other sectors,\textsuperscript{17} and use many run-on legacy systems that are no longer supported. Indicative of this low level of investment many NHS trusts are still using Windows XP, an operating system that Microsoft stopped supporting in 2014.\textsuperscript{18}

In addition, cybersecurity experts are in short supply, and cash strapped healthcare organisations cannot afford to pay the market rate for their services. Fragmented governance is another big problem, leading to a lack of clarity over who is responsible for securing systems and data. The UK healthcare sector comprises many thousands of distinct entities, and clear accountability and responsibility for cybersecurity at a national level are lacking. Finally, the culture of healthcare understandably focuses on caring for patients, even at the expense of security. One symptom of this patient first culture is the widespread sharing of passwords—a practice that makes sense but undermines security.

**What does the future hold?**

So far, attacks on healthcare have principally been for financial gain; the integrity of data has not been compromised. But we face the prospect that, intentionally or unwittingly, it will be. Consider the harm that could be caused by altering blood groups or test results.

Another worrying prospect is that of malicious cyberattacks on medical devices. In 2014 more than 300 medical devices were identified as being at risk.\textsuperscript{19} In 2016 patients were warned of a vulnerability that could allow hackers to take control of the Animas OneTouch insulin pump.\textsuperscript{20} Barnaby Jack, a well known hacker, has shown how to hack a Medtronic insulin pump to deliver a lethal insulin dose with a remote control.\textsuperscript{21} Risks such as these seem set to rise with the rapid growth in consumer, wearable, and mobile technologies.\textsuperscript{3,21}

Poor cybersecurity also has major financial and reputational risks for healthcare. Every European institution, including healthcare providers, should be thinking about the implications of the General Data Protection Regulation, which comes into effect in 2018. Among other things, the regulation makes it mandatory to report security breaches within 72 hours; non-compliance can result in a fine of up to £20m or 4% of annual global turnover.\textsuperscript{22} The UK has had little central guidance or leadership on how organisations can meet these responsibilities. Another worry is that large scale compromises of patient data might undermine public confidence, making patients more reluctant to share their data with clinicians or researchers.\textsuperscript{23,24}
What can the healthcare sector do?

Cybersecurity can never be 100% effective, and the threat to healthcare is an unavoidable new reality. But individuals and organisations can take practical steps to protect themselves and to reduce the effects of an attack.

An ultimate aim of cybersecurity should be to strengthen resilience. Resilient organisations are less likely to have their security breached and suffer less harm when breaches do occur. A simple approach to improving resilience is to maintain secure and up-to-date backups so that an attack will not result in the permanent loss of data. In the case of a cyberattack on Papworth Hospital in 2016, a ransomware infection fortuitously happened just after the daily backup, so no data were lost. More generally, good cybersecurity should be incorporated into the design of new IT projects from the outset and should be inherent in all healthcare systems. Security that is bolted on, or worse still, thought about only after a major incident is often more expensive and less effective.

Another mechanism for enhancing resilience is insurance—a rapidly growing business with global sales of $2.75bn in 2015. The rising costs might cause insurance companies to tread with caution in future, but the right insurance regime can drive improvements by providing financial incentives for organisations to take better care of themselves. Healthcare providers need to find cost effective ways to protect themselves against the potentially crippling costs of cyberattacks, in much the same way as they do with the costs of clinical negligence. Cybersecurity can be further bolstered by national support for incident management, organisational preparedness, and threat advice. The mechanisms for providing such support are beginning to emerge—for example, the CareCERT initiative the UK.

In addition to strengthening resilience, we need to develop common security standards that are relevant to the healthcare sector. Many general standards exist for cybersecurity, such as the CIS Critical Controls, NIST 800-53, and ISO27001. The UK National Cyber Security Centre offers expert guidance on how organisations can protect themselves and grow resilience, including their “10 steps to cybersecurity” (box 2).

**Box 2 | Key steps to improving cybersecurity and resilience**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set up a risk management regime—Assess the risks to your organisation as you would for financial, clinical, or operational risks. Embed cybersecurity in risk management processes across the organisation.</td>
</tr>
<tr>
<td>2</td>
<td>Network security—Defend your networks and filter out unauthorised access or malicious content; for example, through use of firewalls and intrusion detection systems.</td>
</tr>
<tr>
<td>3</td>
<td>Malware prevention—Establish effective defences.</td>
</tr>
<tr>
<td>4</td>
<td>User education and awareness—Produce a cybersecurity policy and ensure that it corresponds with staff training. Cybersecurity and risk awareness should be mandatory in the same way as for information governance, fire safety, and child protection training.</td>
</tr>
<tr>
<td>5</td>
<td>Removable media controls—Control or limit access to removable media (such as memory sticks) and scan all media for malware before allowing access to systems. Consider whether there is a need to allow any access; for example, by blocking ports.</td>
</tr>
<tr>
<td>6</td>
<td>Secure configuration—Ensure all relevant patches and updates are applied and that hardware and software are regularly updated.</td>
</tr>
<tr>
<td>7</td>
<td>Home and mobile working—Develop a secure mobile working policy and train staff to follow it. Remember that data need to be protected both in transit and off site, and special consideration must be given to patients and staff accessing medical records remotely.</td>
</tr>
<tr>
<td>8</td>
<td>Incident management—Establish a robust incident response and disaster recovery capability to ensure safe care can be delivered in an attack. Report all incidents.</td>
</tr>
<tr>
<td>9</td>
<td>Monitoring—Continuous monitor systems and networks for unusual activity that may indicate an attack is in process.</td>
</tr>
<tr>
<td>10</td>
<td>User privileges—Control access and limit user privileges to essential systems whenever practical and ensure that regular activity log audits are made.</td>
</tr>
</tbody>
</table>

These principles are linked to the UK government’s Cyber Essentials Scheme, which provides guidance and an entry level assurance framework to help mitigate common risks. Standards are only helpful if they are relevant and are used. Currently, no standards are specifically designed for the healthcare sector and none is routinely or consistently applied. Fragmented governance, huge interconnectivity, widespread access, the lack of regulatory pressure on security, and limited resources indicate a need for healthcare specific cybersecurity standards and solutions.

US Congress recently established a task force to assess how the healthcare sector can protect itself from cyberattack, streamline its leadership and create incentives for organisations to update their networks. For the NHS to apply these lessons, NHS Digital must take ownership and responsibility, deploying practices well established in other industries, such as penetration testing, and developing sector specific standards so that local resilience can be objectively measured, assessed, and benchmarked. Moreover, it must develop a national prevention strategy, consider introducing a centralised “cash for clunkers” programme to provide organisations with additional funding or incentives to replace outdated hardware and systems, and be empowered to create and mandate local and national response plans for major cyber incidents. Cybersecurity preparedness and resilience must also be integrated into local and national quality metrics—for example, through the Care Quality Commission, to drive improvements and to explicitly hold local and national leaders to account.

**Conclusions**

The healthcare sector is complex, fragmented, and chronically short of resources, yet it holds large numbers of sensitive and valuable data in vulnerable systems. Cybersecurity is not just about protecting data; it is fundamental for maintaining the safety, privacy, and trust of patients. Effective cybersecurity must become an integral part of healthcare systems, a pillar of regulation, and the subject of future research strategies. We must urgently develop practical standards and solutions that are specific to the healthcare sector, agree clear lines of responsibility and governance, and commit appropriate resources to the provision of adequate security.
LETTERS

Selected from rapid responses on bmj.com. See www.bmj.com/rapid-responses

MAYORS AND AIR POLLUTION

London should ban all diesel vehicles

We welcome London mayor Sadiq Khan’s leadership on air pollution in London (Air Pollution: Feature, 17 June). We support all the initiatives that he has launched and his future plans to tackle this major threat to public health.

As Khan says, air pollution “is responsible for the premature deaths of more than 9000 people in London every year.” We urge the mayor to emulate the bold leadership of the mayors of Paris, Mexico City, Madrid, and Athens by introducing a ban on all diesel vehicles in London in the next decade. The proposed ultra low emissions zone in London is a commendable first step in the right direction but should be seen as part of the journey and not the final destination.

Air pollution poses a serious and immediate threat to health. A ban on diesel vehicles in London is a logical and highly effective countermeasure to this threat.

Gee Yen Shin PHE, consultant virologist, London

Rohini J Manuel PHE, consultant microbiologist, London

Cite this as: BMJ 2017;358:j3288

MEDICAL FACT BOXES

Ovarian cancer screening

The fact box on ovarian cancer screening is very clear (Fact Boxes, This Week, 27 May). Why it exists at all, given that screening has no mortality benefit, is not so clear.

Stephern R Workman, physician, Halifax, Canada

Cite this as: BMJ 2017;358:j3277

Authors’ reply

Doctors and patients can more easily understand the risks of screening when presented in a fact box. But doctors continue to screen—why?

The answer is “SIC syndrome.” “S” is for self defence. Doctors practise defensive medicine for fear of litigation or damage to their reputation if they overlook cancer. “I” is for innumeracy. Many doctors don’t understand health statistics relevant for screening, or they uphold beliefs uninformed by evidence from randomised trials. “C” is for conflicts of interest. In a fee-for-service system not screening means loss of income.

A doctor who recommends screening might be motivated by fear of litigation and reputational concerns or by financial worries, or both. Innumeracy can be a moral blindfold so that doctors who recommend screening don’t notice that they are violating the Hippocratic oath. Not knowing the evidence preserves the illusion that harm to patients is in their best interest.

Gerd Gigerenzer, director, Berlin

Kai Kolpatzik, department head, Berlin

Cite this as: BMJ 2017;358:j3281

Independence is critical for shared decision making

The article commending AOK for being the first health insurance provider to develop fact boxes systematically deserves comment.

Shared decision making tools change and improve decision making, but a shared decision needs more than a tool. Four steps must occur: the trigger; administering the information; promoting active participation of patients by the expression of their values; and analysing whether the patient is comfortable with the decision by rephrasing.

Independence is critical for balanced information. So a health insurer developing fact boxes may not be a good idea and be a slippery slope for creating conflicts of interest. The inertia of national agencies in charge of quality of care is at fault. Nature abhors a vacuum.

Alain Braillon, senior consultant, Amiens

Cite this as: BMJ 2017;358:j3286

TERRORIST ATTACKS

Debriefing after terrorist attacks lacks evidence

Torjesen discusses the lessons to be learnt from recent mass casualties and major incidents (This Week, 10 June). Comments on “hot and cold debriefing” might be useful for institutional memory but should be regarded with caution for health workers coping with stress.

Reviews have found a lack of evidence for the efficacy of debriefing clinicians after critical incidents and for the effectiveness of most interventions used to prevent post-traumatic stress disorder in patients.

The Cochrane review on “single session” debriefing for the prevention of post-traumatic stress disorder found no benefit, and even where debriefs are advocated, training is inadequate.

We reiterate the president of the Royal College of Emergency Medicine’s calls for trusts to offer support and to implement holistic working patterns and rotas with leave even in such trying times, interventions that reduce demand, increase autonomy, and encourage managerial support help to make workers feel valued.

T Hampton, ENT registrar, Upton

J Willson, emergency medicine registrar, Bristol

Cite this as: BMJ 2017;358:j3178
OBITUARIES

Jonathan Gerwyn Evans
General practitioner (b 1962, q Barts, London, 1987; MRCP, DRCOG), died after a short and sudden illness on 27 March 2017
Jonathan Gerwyn Evans was born in Caerphilly and went to school at Brynteg. He studied medicine at Barts and did an intercalated BSc, which left him hating papayas. He returned to Wales to do his vocational training scheme in Bridgend, before becoming a partner at Stanwell Surgery, Penarth, almost 25 years ago, and our senior partner from 2012. Many of our patients have known him since his arrival, and are indignant at fate for taking away “their general practitioner.” As his partners and staff, we feel as though we have lost our captain. Outside work, Jonathan enjoyed sailing, as well as walking, gardening, and rugby. He was a good GP, a gentleman, a friend, a mentor. We will miss him greatly. He leaves his wife, Nicky, and four children.

Khan Nawab Khan, Christian Frank Ogden
Catherine EL Sloan, Claire Goodson
Cite this as: BMJ 2017;358:j3224

Wendy Patricia Holmes
Consultant community paediatrician (b 1937; q Trinity College Dublin 1960), died from acute myeloid leukaemia on 20 May 2017
Wendy Patricia Holmes was successively an assistant county medical officer, senior medical officer, senior clinical medical officer, and consultant community paediatrician. She studied all aspects of child development and disability, contributed to planning and teaching at courses for general practitioners, and gave lectures and talks to teachers, student midwives, playgroup leaders, health visitors, GP trainees, and parents. She managed a developmental assessment service for preschool children, and developed an assessment service for children of all ages with social communication and allied disorders. For many years she was medical officer to Valence School for children with physical disabilities. She leaves her husband, David Lambert, and an adopted daughter.

David Lambert
Cite this as: BMJ 2017;358:j3225

Robert Fischl
Plastic and reconstructive surgeon (b 1928; q Durham 1951; FRCS), d 26 May 2017
Robert Fischl was born in Dresden, Germany, which he and his parents left in 1939. The family settled in the north of England, where Robert qualified. He served as a surgeon in the Royal Army Medical Corps in the Malayan campaign of 1953-55 and then went to the US for additional training. He trained in plastic surgery in New York at Mount Sinai and practised there for a decade, before moving to Danbury Hospital in Connecticut, where he was chief of plastic surgery for 24 years. He invented several instruments used in plastic surgery, developed original procedures, and published widely. An accomplished artist, he taught a course entitled “Anatomy for Artists” for 10 years. His paintings were handled by galleries in Connecticut and Hawaii. He leaves his wife, Irene.

Scott Urquhart
Cite this as: BMJ 2017;358:j3212

Michael R Pokorny
Consultant psychiatrist, psychoanalyst, and psychotherapist (b 1937; q Sheffield 1961; FRCPsych, DPM), d 12 June 2017
Michael R Pokorny was a senior registrar in the adult department of the Tavistock Clinic and became a member of the Institute of Psychoanalysis. He subsequently practised privately as a psychoanalyst and psychotherapist. In later years, he worked in general adult psychiatry and studied intensive short term dynamic psychotherapy. He was widely respected as a practitioner, for his writings, and as a supervisor. His key contribution has been to the organisation of psychotherapy in the UK. He was instrumental in the move to unite the profession, and was chair of the UK Standing Conference for Psychotherapy in 1989, and chair when the UK Council for Psychotherapy (UKCP) was formed in 1993. He was made an honorary fellow in 2006. He leaves two sons, a daughter, and two grandchildren.

Aron Bentovim
Cite this as: BMJ 2017;358:j3218

John Kenneth Oyston
Orthopaedic surgeon Royal Air Force and at Halifax Royal Infirmary (b 1925; q King’s College of Durham University, at Newcastle, 1948; FRCS), died from pneumonia on 2 May 2017
John Kenneth Oyston (“Ken”) trained as a general surgeon at the Royal Victoria Infirmary in Newcastle. He married Audrey Wilkinson in October 1955 and took up a commission as a flight lieutenant in the Royal Air Force the following month. He rose to the rank of wing commander before taking early retirement to pursue a second career as a consultant orthopaedic surgeon at Halifax Royal Infirmary. He retired at 62 and enjoyed 30 years of retirement. He especially enjoyed sailing holidays in the Mediterranean. Ken and Audrey were keen gardeners and sometimes opened their garden to the public for charity events. Predeceased by Audrey, Ken leaves two children, four grandchildren, and a great granddaughter, born 17 days before he died.

John Oyston
Cite this as: BMJ 2017;358:j3215

Arthur Claude Wilson
Consultant obstetrician and gynaecologist Southport General Infirmary and Christiana Hartley Maternity Hospital, Southport (b 1929; q Glasgow 1951; FRCOG), died from Alzheimer’s disease on 1 May 2017
After qualifying, Arthur Claude Wilson joined the Royal Army Medical Corps and served in east Africa during the Mau Mau uprising. He returned to the UK with Joan, his new wife, and trained in obstetrics and gynaecology in Portsmouth, Cambridge, and Sheffield, gaining his consultant appointment in Southport in 1962. Here he worked as a singlehanded consultant until he retired in 1989. He introduced the proactive management of labour in Southport, performing his own epidurals. Arthur became a proficient cabinet maker and played the violin in chamber groups and a ceilidh band. Arthur leaves his second wife, Geraldine, and a son.

Nicholas M Wilson
Cite this as: BMJ 2017;358:j3222
Keith Conners

Last words on ADHD from the father of the diagnosis

C Keith Conners (b 1933; BA Liberal Arts, University of Chicago, 1953; MA, Philosophy, Psychology, and Physiology, Oxford University, 1955; Stanford University 1956; PhD Clinical Psychology, Harvard University, 1960), d 5 July 2017

Shortly before his death on 5 July 2017, Keith Conners helped us write this obituary. He wanted to provide one last word of warning on attention-deficit/hyperactivity disorder—a condition that 50 years ago he helped identify and validate, but recently had done his best to restrain. Keith had collaborated with Leon Eisenberg in the early 1960s, when what we now call ADHD began to take shape, and probably knew more about what the disorder is, and is not, than anyone who has ever lived.

Psychopharmacology in children

As a young child psychologist at Johns Hopkins, Eisenberg asked Keith to analyse data from the very first randomised clinical trial of d-amphetamine (Dexedrine) in children with severe hyperactivity and impulsivity. Soon after, he conducted the first trial of a much newer drug, methylphenidate (Ritalin), and published papers announcing distinctly positive results. By the end of the 1960s, Conners had developed what became the standard rating scales that were used to assess children’s symptoms and measure the impact of treatment. His work provided the foundation for psychopharmacology in children, which at the time was controversial.

Although it went through several name changes—hyperkinetic reaction of childhood, minimal brain dysfunction, and, finally, attention deficit disorder in 1980—the condition became an official diagnosis that was included in the Diagnostic and Statistical Manual of Mental Disorders and was gradually accepted by the medical establishment and society. Throughout this evolution, Keith participated in the most important trials, the most important studies, and the most important conferences—always lending an erudition and wit that his colleagues admired greatly.

Keith worked at Johns Hopkins, Harvard, and other universities before founding the ADHD clinical programme at Duke in 1989. He helped lead the landmark Multimodal Treatment Study of Children with ADHD—the “MTA study,” generally described as the most comprehensive and influential study in child psychiatry—and founded the Journal of Attention Disorders.

Overdiagnosis?

Keith was justifiably proud of his work on ADHD, but in his final years he began to cringe at how the diagnosis—so useful when correctly applied to the few—had become so badly misapplied. He considered the true prevalence of childhood ADHD to be around 2-3%; rates of diagnosis, meanwhile, have risen persistently, to the point where today about 11% of American children are already diagnosed with ADHD, and 15% will receive the diagnosis before they turn 18. Other countries, to various extents, have seen similar unjustified rises. Keith believed that the overdiagnosis and overmedication of millions of children resulted from aggressive marketing by pharmaceutical companies, careless doctoring, worried parents, and schoolroom chaos. Large studies in many countries have shown that the best predictor of whether a child is diagnosed with ADHD is his or her birth date—the youngest children in any elementary school class, who are naturally more immature than their peers, are diagnosed considerably more often than the older children.

Keith knew that attention and hyperactivity problems occur on a spectrum, with only the severe end needing treatment with stimulants, first Ritalin (methylphenidate) and now mostly Adderall (amphetamine and dextroamphetamine), Concerta (methylphenidate), and Vyvanse (lisdexamfetamine). He was most recently alarmed by the widespread carelessness in diagnosing ADHD in adults and by the risk that the prescription of stimulants can worsen a missed psychiatric diagnosis. He called the overdiagnosis of ADHD in the US “a national disaster of dangerous proportions.”

Like his mentor, Leon Eisenberg, Keith discussed his horror in articles and at professional conferences; as he became too feeble to fly, he allowed a reporter from the New York Times to tell his story, warts and all, in a book called ADHD Nation. The book helped expose the distortion of the diagnosis by medical and corporate interests, and the epidemic of stimulant abuse on college campuses and now high schools. He courageously accepted his role, however unwitting, in ADHD’s veering so far off course.

We will miss him terribly, as will medicine and psychology, and the many patients, families, and school systems that benefited from his work.

Allen Frances allenfrancesmd@gmail.com
Bernard J Carroll

Cite this as: BMJ 2017;358:j2253
DIGITAL HIGHLIGHTS

Podcast on getting pronouns right

Our latest podcast features two of the authors of a What Your Patient is Thinking article on the experiences of transgender patients. In the passage below, author Emma-Ben, a clinical teaching associate at the John Radcliffe Hospital in Oxford, discusses the importance of getting a patient's preferred pronoun right and how it feels when this doesn't happen.

“...To be misgendered by somebody who I haven't asked to use any different pronoun, who's just made an assumption about what my pronoun is by looking at me, that hurts in a very generalised way. It's another little needle, a little reminder of 'Oh yes, the world really isn't set up for people like me.'

An honest mistake is one thing, everybody makes them. I'm sure I've mis-pronouned myself enough over the years. But when somebody intentionally refuses to use certain pronouns for me, those are the much more hurtful instances, where people either decide that my comfort is much less important to them than their own slight unfamiliarity with a way of speaking, or who promise a certain level of respect and supportiveness and then are unable to deliver it. “[Using the right pronoun] is just about respecting and mirroring the language that a patient uses to talk about themselves, which I think doctors are used to doing in lots of different ways... [They often have to go] to where the patient’s coming from to make sure they’re speaking a language that’s mutually understood. And I think that using the pronoun that a patient is most comfortable with is part of that basic respect.”

Listen to the full podcast at bmj.co/trans_wypit

Sexuality and psychiatry

With a theme of “Psychiatry without Borders,” the Royal College of Psychiatry’s annual international congress in Edinburgh last week was on-trend in a post-Trump, post-Brexit era. Boundaries of gender and sexuality were front and foremost of the keynote talk given by Michael King, professor of primary care psychiatry at University College London. His talk on “the impact of stigma in psychiatry told through the lens of sexuality and gender” was timely given the recent celebrations of the 50th anniversary of the Sexual Offences Act 1967 which decriminalised homosexuality in the UK.

King examined post-war attitudes towards homosexuality among doctors and psychiatrists, finding further evidence that medical professionals have not always been on the right side of history. The Wolfenden Report—published in 1957 and widely believed to have paved the way for the Sexual Offences Act 10 years later—was produced by a committee that included three doctors. While the report recommended that "homosexual behaviour between consenting adults in private should no longer be a criminal offence" and that "homosexuality cannot legitimately be regarded as a disease”—King pointed out that medical opinions taken into consideration remained full of "moral disdain" for gay men, ignored the existence of lesbians, and recommended “conversion therapy” as a treatment to “cure” homosexuality.

Conversion therapies—both religious and behavioural—remained popular in certain settings long after the decriminalisation of homosexuality, partly fuelled by the presence of homosexuality as a diagnosis in the International Classification of Diseases up until 1992. Research published in the UK as recently as 2009 revealed that one in six contemporary psychologists had engaged clients in efforts to change their sexual orientation.

Not until November 2015 was the cross-organisational Memorandum of Understanding on Conversion Therapy in the UK signed by medical, psychological, and commissioning organisations declaring conversion therapy to be unethical. It concluded that there is no good evidence that it works, while there is evidence that it can cause harm.

Kate Adlington, Clinical editor, The BMJ

MOST READ ONLINE

I am your trans patient
BMJ 2017;357:j2963

Law, ethics, and emotion: the Charlie Gard case
BMJ 2017;358:j3152

Five things I wish I'd known at the start of my career as a GP
BMJ 2017;357:j3042

Judging the benefits and harms of medicines
BMJ 2017;357:j3129

Pressure on NHS finances drives new wave of postcode rationing
BMJ 2017;358:j3190