

comment

"Since 2000 the NHS has had six national plans and 10 reorganisations" **DAVID OLIVER**

"Why not have a cigarette if your genes predict an early death" **HELEN SALISBURY**

PLUS The importance of worktime eating and drinking; social prescribing

WOUNDED HEALER Clare Gerada

Prevention of unhealthy perfectionism

Recently, just before giving a lecture at my old medical school, I was handed my student report card. In the corner was a small passport photo of the young me, and below were the grades I achieved during each attachment, including my elective and student locum.

No comments, just grades. My scores were average: mainly Bs and B+s, a few C+s, even a C. Seeing this card nearly 40 years later was a surprise. I had no idea that each clinical firm was graded, and I'd assumed that the only scores we received were at finals. It set me thinking about how different it is for today's medical students.

Far from fitting on two sides of A4, today's student record (if one could unscramble the e-portfolio) would stretch across several volumes. Endless supervisor reports, grades on every aspect of training, personal reflections, and multisource feedback. Students, and later doctors in training, are in a perpetual cycle of assessment, scrutiny, grading, and comparison with peers.

I worked hard at medical school. Perhaps it's fortuitous that I didn't know that my grades told a different story: such was my competitive spirit, I might have worked a lot harder. And, if I had, I would've had no time for fun, friends, and family. Nor would I have learnt how to create the healthy work-life balance vital for my future as a doctor: given my personality, I would probably have set unrealistic standards for myself and striven for the unachievable—perfection.

All doctors have some degree of perfectionism: after all, meticulous attention to detail and the wish to get things right are desired characteristics. Healthy perfectionists set high standards for themselves but drop these when required. Doctors also develop a cognitive triad of doubt, guilt, and an exaggerated sense of responsibility. We don't leave work undone, and we put patients first.

The nature of medicine, combined with doctors' tendency to internalise high standards, means that

we're inclined to work harder, achieve more, give more to our patients, and deny our own needs.

Even healthy perfectionism can turn against us in times of stress. It can lead to never feeling good enough, being overly self critical, and placing impossible demands on ourselves. This can cause a cycle of failure, procrastination, and seeking reassurance.

Unhealthy perfectionism risks doctors becoming mentally unwell as they blame themselves for the losses and failures that are inevitable in medicine. Doctors at the extreme end of the perfectionist continuum find it hard to relax if they don't continually excel. In fact, recent research has shown that perfectionism leads to more "detrimental" work and non-work outcomes.

I was lucky. I was protected from my innate desire to do better and achieve more, although I've still had a fulfilling career and delivered good patient care.

We must reduce the stressors on today's doctors, and an important step would be to create a sensible balance of scrutiny, assessment, and professionalism.

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Doctors develop a cognitive triad of doubt, guilt, and an exaggerated sense of responsibility



Should patients pay for genetic tests?

Our technophile health secretary recently announced that patients will be able to pay the NHS to have their genome analysed as long as they consent to their data, appropriately anonymised, being available for research. Is this a good idea?

The NHS currently works on the basis of need: if you need a test or treatment it's free at the point of use. If you want it but don't need it, or if it's not likely to be cost effective (often quite contentious decisions), you'll have to buy it outside the NHS. This proposal introduces something akin to co-payment, a system prevalent in insurance based systems where the patient has to contribute directly to healthcare costs.

Funding issues aside, this genetic testing has no obvious benefit to the patient. In my generalist, GP understanding, genetic testing is useful in characterising tumours, so that treatment can be tailored to the patient, or in identifying which patients with an adverse family history may be at risk of inherited diseases.

Even in the latter case, this isn't always information that the patient wants if no preventive action is available. Predicting the risk of Alzheimer's is often mentioned in reporting on this topic, but I'm not sure I'd want to know that I have an above average risk of developing dementia if there's nothing I can do about it.

Of course, people can do things to modify their risks, such as stopping smoking, eating well, moving more, drinking less alcohol, and taking part in evidence based programmes for early detection of treatable conditions. The results of genome testing are unlikely to change that advice, but might knowing your genetic risk affect how eagerly you embrace it?

It may make you all the more keen to put on your running shoes to stave off a heart attack. Alternatively, it may make you feel out of control and fatalistic about your health: why not have another cigarette if your genes already predict an early death?

Luckily, we don't have to speculate, as a helpful meta-analysis shows that information about genetic risk had no effect at all on the behaviour of participants in 18 relevant studies. The research wasn't all of the highest quality, but the results were consistent.

One fairly certain prediction is that patients who receive the results of genetic tests will need help in understanding them. Just 230 consultant clinical geneticists were working in the UK in 2017, and I doubt that they'll have the capacity to take on this task. It's therefore very likely to fall to GPs, who will have a lot of work to do to develop the relevant expertise.

Mr Hancock, what would you like me to stop doing to make time for this extra work?

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Patients who receive the results of genetic tests will need help in understanding them

NEW BMJ PODCASTS



Everything you need to know about PEP and PrEP

In this podcast, Michael Brady, a sexual health and HIV consultant, helps answer common questions about drug prevention of HIV. As he discusses below, doctors prescribing post-exposure prophylaxis (PEP) treatment need to act fast:

"When someone is exposed to HIV there's a window of opportunity before an infection becomes established—in other words, before the point of no return. There is around 48 hours as the virus moves into the body. So, if you assessed somebody as being eligible for PEP—that the exposure has been risky enough—it's best to give them their first dose as quickly as possible. If the patient subsequently decides that they don't want or need it, you're not going to have done any harm. We would always recommend starting as soon as you can, and then refer them to a sexual health clinic and we'll reassess and continue if need be."

The assisted dying debate

With the Royal College of Physicians polling its members this month on physician assisted dying (referred to by some as assisted suicide), *The BMJ's* Richard Hurley talks to those on all sides of this controversial debate. This includes Sandy Buchman, a palliative care physician in Toronto, Canada, who has provided medical assistance in dying:

"I do see it as consistent with being a palliative care physician, but I am very respectful of my colleagues whose values, whose faith, whose backgrounds do not permit them to cross that line. This is a very difficult line. [We need] respect for the autonomy of the patient, but we need to respect the autonomy of each physician, and I seek respect for my decision. We're all in this together and we have to deal with it as physicians."



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Curated by Kelly Brendel, assistant web editor, *The BMJ*

DISSECTING RESILIENCE

Social and psychological isolation of doctors

Gerada's article on the overlooked value of peer support between medical students and doctors is pertinent (Wounded Healer, 1 December).

Areas where doctors can gather informally have been either greatly reduced or eliminated. This has happened insidiously, with political correctness and financial pressures being used as justification, at the expense of trainees' and consultants' wellbeing. The problem has been compounded by shift working, so that doctors on duty have only brief opportunities to get to know their colleagues from the same or different disciplines.

The net effect has been to take away the structures that helped medical students become well balanced and caring doctors and provided a continuous means of psychological support to qualified doctors.

The resulting social and psychological isolation of the modern generation of doctors seems to have reached an all time high. Current shortages in the medical workforce, the high incidence of stress disorders among trainees, and the increasing number of doctors leaving the profession early warrant serious consideration for present and future doctors.

John Hood, retired paediatrician, Eynsford; Jeremy Plewes, retired orthopaedic surgeon, Alvechurch

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CLOZAPINE DEATHS

Putting clozapine in perspective

Concerns about clozapine's toxicity are not new (This Week, 5 January), typically surfacing in response to preventive deaths. Calls for improved monitoring are justified but have had limited impact, in part due to fatal agranulocytosis being very rare



LETTER OF THE WEEK

GPs should have doctors' messes too

Rimmer's article about doctors' messes emphasises the importance and benefits to hospital colleagues of having a "space to breathe" in the middle of busy, stressful days (Feature, 12 January).

Such space is just as important in general practice. Our days on the front line of patient care are equally pressured. And primary care has the added challenge of having to switch rapidly between specialties; a breathless toddler, then someone with cancer, a suicidal teenager, and so on.

The doctors and nurses in my practice meet daily for lunch. It's often a working lunch, fielding queries from reception, signing prescriptions, and triaging visits. But it provides a space where we can support each other and share our breadth of experience as we discuss clinical conundrums. And, just as importantly, it's an opportunity to simply pause and chat.

New trainees, visiting medical students, and locums often tell us that we're unusual and that, in many surgeries they visit, GPs keep to themselves, quickly eating a lunchtime sandwich at their desks, and sharing little more than a passing nod with colleagues.

I couldn't cope with my day under those circumstances. Like the doctors in the article, having our "mess" not only helps us to de-stress but is also good for our patients.

Simon E Atkins, GP principal, Bristol

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and largely prevented by the requirement for regular blood counts. Severe constipation induced by clozapine, however, is not rare and is more difficult to monitor, leading to a disproportionate share of preventable deaths.

Crucial to any discussion of the harms of clozapine are its superior efficacy and its association with lower mortality from both natural and unnatural causes, including suicide.

Based on this evidence, calls have been made for it to be used sooner in the treatment of severe psychotic illness.

David B Menkes, academic psychiatrist, Hamilton, New Zealand

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Consider testing for antibody deficiency

We found a striking association between clozapine and antibody deficiency. Patients taking clozapine follow an intensive regimen of blood testing for agranulocytosis, but antibody testing is not currently included.

We urge consideration of this potential mechanism as a modifiable risk factor for the higher rates of pneumonia and sepsis related mortality reported in this vulnerable cohort.

Mark J Ponsford, ST5 clinical immunology; Stephen Jolles, consultant clinical immunologist and honorary lecturer, Immunodeficiency Centre for Wales, Cardiff

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Better quality monitoring of adverse drug reactions

Responses to the tragic deaths caused by the side effects of clozapine represent ongoing concerns about the quality of monitoring of patients, rather than the quality of prescribing.

We have shown that the introduction of thorough, structured checks by nurses and care staff can identify problems related to antipsychotics and prompt preventive action.

Adverse drug reactions often develop after the prescriber has left, so we need a mechanism for transferring information from patient to prescriber, across geographical and social distance.

Comprehensive, nurse led monitoring with supporting information has the potential to bridge this gap.

Sue Jordan, professor of health services research; David Hughes, professor in health policy, Swansea

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MISSED GP APPOINTMENTS

Asking why patients miss appointments

Missed GP appointments have been the subject of intense political interest, much of it misleading and designed to blame "feckless" patients (Sixty Seconds, 12 January).

We have found a strong association between repeatedly missing appointments and increased risk of all cause mortality, independent of known long term conditions and particularly in patients with mental health conditions.

Clinicians (and politicians) should carefully consider the causes of repeated missed appointments rather than ascribing blame.

Philip Wilson, professor, Inverness; Ross McQueenie, research associate, Glasgow; David Ellis, lecturer, Lancaster; Andrea Williamson, clinical senior university lecturer, Glasgow

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ANALYSIS

Citizens' juries can ensure the public has its say on overdiagnosis

As practitioners and policy makers struggle to manage the risks and harms of mass screening programmes, **Chris Degeling and colleagues** contend that asking for the opinions of informed lay people offers a way forward



KEY MESSAGES

- Overdiagnosis challenges the social contract that underpins healthcare, and community voices are often missing from the relevant policy discussions
- Citizens' juries elicit the voices, values, and preferences of informed citizens who are presented with evidence based expert views
- Jurors deliberate the evidence among themselves before formulating their opinions and recommendations
- Citizens' juries can elucidate public values that can then be used to inform policies and practices to manage the risks of overdiagnosis
- The findings can contribute to guideline development and proposed changes to disease thresholds
- The process aligns with the basic tenets of evidence based medicine and can broaden and improve the dialogue around medical uncertainty

Most high income countries develop evidence based policies to guide population screening using stringent criteria that are applied by expert panels to review the available technical evidence. The final judgments on the acceptability and legitimacy of screening policies and disease definitions are informed by the values of the decision makers, because the relative balance of harms and benefits of changes are subjectively weighed and valued.⁵⁻⁷ For the deliberation sponsors (researchers, government, or other agencies), putting matters to the public can promote greater social and political engagement, public accountability, and confidence in the decision ultimately made.

Public engagement occurs on a spectrum of participation from events that aim to consult the public (consumer forums or patient groups) to more formal deliberative methods such as citizens or community juries that seek to bring lay people into structured deliberation to tackle key complex problems (box).⁸ In this paper, we explore some of the advantages and limitations of using citizens' juries to inform policy making in the complex policy areas of overdiagnosis.⁹

Citizens' juries to consider screening and overdiagnosis

They are appropriate when the evidence is uncertain, and experts or stakeholder groups (or both) disagree on its implications.

In relation to overdiagnosis, citizens' juries have been convened primarily by researchers to provide evidence for policy making that articulates values and explains the reasoning and preferences of an informed public. Juries can help those who develop screening guidelines to understand why patients go against expert advice and can inform them of the factors that need to be explained and explicitly considered to retain public trust.

Citizens' juries are designed to allow participants to first be informed, and then to discuss, reflect, and clarify their own views about a topic rather than recording people's top-of-mind

or intuitive reactions to contentious problems (like focus groups or mass surveys). In response to the question: "Should the government offer free mammography screening to all women aged 40-49?" surveys would likely capture the prevailing public mood as to the importance of helping women access preventive health services rather than a nuanced view on the implications of lowering the age related entry point for the national mammography screening programme.

A citizens' jury comprising women who had never participated in screening convened in Otago, New Zealand, to answer this question. Almost all of the women had been in favour of mammography screening for women aged 40-49 at the start of the jury. By the end of its deliberations, however, the jury voted 10 to 1 against the proposal to lower the entry age because of the potential for harms and the lack of evidence of lives saved in that age group.¹⁰

Citizen juries emphasise public values and social concerns that are not part of the evidence base but could be of great importance to policy implementation. Two juries (see table, p 238) composed of Australian women aged 70-74 voted to retain invitations to mammography screening for their age group.¹¹ The reasons the jurors provided show that, once established, organised preventive health services have great symbolic value, and epidemiological evidence of an unfavourable balance of benefit to harm may not be enough to convince people of the need to stop.

Although independent, evidence based, expert advice is essential, good policy also relies on public trust. Through their exposure to evidence and expert opinion, these juries understood that for population screening services to be effective there must be tolerance for a degree of overdiagnosis. The women's tolerance threshold, however, seemed to be higher than that of the experts who were advising against screening.

Choosing jurors, types of evidence, and framing jury questions

The policy relevance of a citizens' jury convened to tackle an important issue such as overdiagnosis will

The characteristics of citizens' juries

First developed by the Jefferson Centre in 1970s, citizens' juries have been used to tackle issues such as reproductive technology, xenotransplantation, biobanking,⁸⁻²⁵ and overdiagnosis.¹⁰⁻²⁰

Several approaches exist, but at a minimum a group of 12-15 people are selected to meet over 2-4 days to consider and respond to a specific question. A topic, rather than an individual, is "on trial."³³ All citizens' juries have two phases: the first focuses on educating participants, the second on deliberation.

In the first phase jurors are provided with balanced factual information from expert witnesses (of whom they can ask questions and seek clarification), such that a diverse range of potentially conflicting perspectives is

considered.²⁵⁻³⁴ In the second phase the group work together to produce a verdict or set of recommendations.

Citizens' juries create the conditions for people to move beyond superficial arguments and suspicion of vested interests to understand the complexity of medical decision making and then to reflect on their own values and what is important to their communities. Consensus is encouraged but not essential; dissenting views and minority positions are included in the final report.

Like all engagement methods citizens' juries have been criticised.³⁵⁻³⁸ The most common concerns are about the group being representative of the citizenry and whether a group of lay people can overcome deficits in expertise to make judgments that truly reflect their values

and informed preferences.¹⁷ Juries of 12-24 people cannot possibly represent a statistically characterised sample of the general public or the prevalence of views. Rather, they offer insights into how and why informed citizens prioritise concerns about complex issues like overdiagnosis and provide explanations for divergence in opinions.

Participants should be recruited to reflect diversity of experiences and backgrounds, and the deliberation processes organised so as to redress power imbalances as much as is feasible.³⁹

When conducted in this way, citizens' juries can reveal and capture key community concerns and arguments about current or proposed policy directions and enhance accountability in decision making.



depend on three important factors: how the topic or question is posed; who sits on the jury and how they are recruited; and the engagement of decision makers.

Framing question for the jurors

In the juries that we have conducted on screening and overdiagnosis the question, expert witnesses, and the evidence presented to jurors were determined by a steering committee comprising neutral experts and representatives of stakeholders from each side of the existing debates.

The committee, organisers, and expert witnesses worked together to ensure the question put to the jury was framed as "neutrally" as possible so the verdict was less likely to be subsequently dismissed. The quality and reputation of the experts who provided the testimony and the structured process through which they reviewed and moderated each other's presentations helped to ensure that all views presented to jurors were relevant and could be argued from the evidence.

Not every issue is suitable for deliberation. Broadly speaking, citizens' juries on screening and overdiagnosis have answered two

Juries are most useful when the policy options require a deep consideration of both values and evidence

somewhat different but overlapping policy questions: those that explicitly focus on resource allocation and those about which policy options are most justifiable and perceived to be legitimate.¹² Juries are most useful for public engagement when the policy options require a deep consideration of both values and evidence.¹³

Juror characteristics and the type of evidence produced

Citizens' juries construct a form of "mini-public," such that composition of participants will determine how representative the outcome is. Three juries held in Sydney, Australia, on PSA testing and overdiagnosis risks show the difference between those composed of "targeted" or "general" public (table, see p 238).¹⁴

One of the juries comprised men of screening age and two were composed of participants of mixed genders and ages. All juries prioritised allocating resources to support GPs to adopt an active role in supporting individual men to make decisions about PSA. But the two mixed juries wanted all the information on potential harms and benefits of PSA testing to be provided to men before they took the test,

whereas the all male jury did not want men burdened with uncertain and detailed information about risks associated with diagnosis and treatment until they had an adverse test result. This example shows how a jury composed of service users can provide a different perspective and insights into a different recommendation from that of one composed of members of the public who may not be directly affected.

The findings of juries of service users provide insights into what changes to the status quo are likely to be acceptable to those affected. Juries comprising a broader range of citizens tend to reveal broader considerations, including the range of issues that may be important for weighing the fairness of resource re-allocation against a background of competing priorities.⁸

Involvement by policy decision makers

Policy makers do not convene citizens' juries but tend to commission independent researchers. Public deliberation aimed at informing policy decisions around overdiagnosis should ideally involve decision makers in the design or implementation.

Key questions pertinent to overdiagnosis that have been tackled by citizens' juries in Australasia

Question	Sponsors of and reasons for the jury	Specific question and jury characteristics	Verdict	Novel insights
What are the values and priorities that should guide decision making around the promotion of participation in screening services?	Convened by health researchers in Australia and funded by the NHMRC to examine informed men's views about the benefits and harms of PSA testing. Also established to further examine the value of citizens' juries for informing screening policy	One jury of 11 men aged 50-70 with no previous diagnosis of prostate cancer was asked: "Should government campaigns be provided (on PSA screening) and if so, what information should be included?" ^{20 22}	The jury voted unanimously against information campaigns, and against an invitation programme for PSA testing. Instead the jury proposed a campaign targeting GPs to assist them to provide better quality and more consistent information to patients	Men prefer to get information about PSA screening directly from their GPs. There were concerns about the discrepancy and variability in quality of information available to men and that some GPs were not following evidence based guidelines. This study showed that informed citizens are able to distinguish between personal preferences and deliberating to make recommendations for the public good ²⁰
	Convened by health researchers in Australia and funded by the NHMRC to elicit the informed views of older women on the acceptability of ceasing to invite them to use breast cancer screening services	Two juries (n=34) of women aged 70-74 with no previous diagnosis of breast cancer, were asked: "Should the organised breast cancer screening programme continue to invite and promote screening to women 70-74 without cost to participating women?" ²¹	Both juries found by a majority verdict (16 to 2 and 10 to 6) that invitations to participate in screening should continue to be sent to women in their age group	These women valued being invited to screen—they thought it was an opportunity to access information to enable choice and showed that society recognised and supported older citizens. Evidence that an intervention potentially does more harm than good may not be enough to convince people to give it up: this study found that people may consider other factors important
How should care providers and asymptomatic patients manage overdiagnosis risks at the point of care?	Convened by health researchers in Australia and funded by the NHMRC to elicit the informed preferences of citizens and potential service users as to how PSA testing of asymptomatic men should be managed in general practice	Three juries (n=40): two of mixed genders and ages and one all male aged 37-74, none with experience of a prostate cancer diagnosis, were asked: "Should GPs introduce the topic of PSA testing during appointments with male patients who have no symptoms? Or should they wait until men ask about it?" ^{21 14}	In contrast to the RACGP guidelines, all juries concluded (by majority vote) that GPs should initiate discussions about PSA testing with asymptomatic men over 50	Although GPs might resist raising questions about PSA testing, an informed public prefers them to take on this responsibility because, in Australia, there is a lot of divergent advice in the public sphere, and doctors are perceived to be the best placed to inform and explain the risks and benefits

GP=general practitioner; NHMRC=National Health and Medical Research Council; PSA=prostate specific antigen; RACGP= Royal Australian College of General Practitioners

Citizens' juries are more likely to inform policy decisions if those involved recognise the value, role, and limitations of the jury outcomes in larger political processes.¹⁶ Individual clinicians and healthcare managers may find value in juries performed as research as a way to synthesise the diverse values that patients may consider when weighing up screening decisions.

Informing policy around overdiagnosis

Where expert opinion and public opinion diverge, citizens' juries are valuable for understanding why and potentially informing future decisions about public communication and service delivery requirements to deal with patient concerns.

The provision of facts, exposure to well reasoned and sometimes opposing expert opinions, and commitment to working through persistent disagreements (rather than dismissing them as deficits in understanding) can help to rebalance information gaps about overdiagnosis and the discrepancy of power between experts, decision



makers, and the community affected.^{18 19}

Between us, we have conducted more than 15 citizens' juries, several of which have considered overdiagnosis.¹¹⁻²² A consistent observation has been that members of the public report great surprise at the level of uncertainty embedded in medical practice. Most people in high income countries like Australia are encultured to trust medical tests and their doctors.²³ They believe that doctors know the "right" thing to do.²⁴ Trust in doctors is inevitably the resource that people draw on when decisions need to be made in the face of conflicting or uncertain evidence.

Citizens' juries enable them to pull back the curtain on medical evidence and engage more meaningfully in screening policy debates.

Conclusions

If done well, citizens' juries are an effective means to conduct research that informs guideline development for population screening and disease threshold determination.^{12 25}

Much could be achieved to tackle the social and ethical dimensions of overdiagnosis if those charged

with organising and regulating these processes made a commitment to formally consider the values and preferences of well informed members of the public and to understand the complex trade-offs entailed.

Procedurally, citizens' juries are explicit about the limits of medicine and the pervasiveness of medical uncertainty. This fits with the basic tenets of evidence based medicine^{26 27} and offers an authentic means to tackle issues related to overdiagnosis.²⁸

In addition, citizens' juries have the potential to uncover other ways that health services provide value to the public, which need to be explicitly mentioned and accounted for in the implementation of policy.²⁹ Bringing the public into deliberation about overdiagnosis can broaden and improve the dialogue and make the reasons for decisions about resource allocation and potential withdrawal of services more clear and transparent, thus promoting public trust and partnerships at a time when trust in science and medical expertise seems to be in decline.³⁰⁻³²

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Margaret Becklake

Internationally renowned epidemiologist and respiratory medicine specialist

Margaret Rigsby Becklake McGregor (b 1922; q University of the Witwatersrand, Johannesburg, South Africa, 1944; MD, FRCP), died from complications of Alzheimer's disease on 17 October 2018

Margaret Becklake (mostly known as Margot) dedicated six decades of her life to ensuring that others could breathe easily. She undertook international research in respiratory medicine, with a special interest in the host, environmental, and occupational determinants of childhood, and in adult airway disease. A fearless advocate for workers, she witnessed and documented the impact of asbestos, smoke, and all kinds of dust (especially in coal and gold mines and grain mills) on respiratory health in Canada, Kenya, and South Africa. Throughout her career, Becklake employed epidemiology as a tool for change and for protecting the public. She successfully challenged existing clinical dogma and worked hard to improve the lives of workers on low incomes. Remembered as a "voice of eminence and reason," she became a highly respected and well liked physician, researcher, teacher, and mentor.

Becklake was raised in Pretoria in South Africa as her father was appointed superintendent of South Africa's Royal Mint. She qualified in medicine in Johannesburg at the University of the Witwatersrand in 1944 and then did an internship at the Johannesburg General Hospital. She met a young doctor, Maurice McGregor, in 1946, on the day he returned from serving in the second world war. Maurice would become the love of her life and her best friend for more than 70 years. They moved to England to undertake postgraduate training (Margot in respiratory medicine and Maurice in cardiology) and married in Berkeley, Gloucestershire, in 1948. In 1950 they returned to Pretoria, and she accepted an appointment

as a junior lecturer in medicine at their alma mater. In 1951 Becklake published her first research paper. She would continue publishing for another 55 years.

Asthma, asbestos, and occupational exposures

In 1954 Becklake was engaged as a physiologist at the Pneumoconiosis Bureau. She set up one of South Africa's first clinics to investigate lung function in gold miners. She listened to the men's stories and questions and ultimately showed that dust inhalation was causing the miners to contract chronic obstructive pulmonary disease (COPD), in addition to silicosis. As a result, many miners received benefits they had previously been denied.

In 1957 Maurice accepted a position at McGill University in Montreal, Canada, and Becklake became a clinical fellow at the Royal Victoria Hospital. This was an era when only 7% of Canada's physicians were female, and women were expected to stay at home to look after their husbands and children. Becklake made the most of her legendary boundless stamina and strong self discipline while raising two children, supporting her husband, and working as the director of the respiratory epidemiology and clinical research unit at the Montreal Chest Institute. She began by setting up a lung function laboratory and researched exposure to chrysotile asbestos among miners and millers in the town of Asbestos, Quebec. By 1978 she was president of the Canadian Thoracic Society.

During her long career, Becklake held academic appointments in McGill University's departments of medicine, experimental medicine, epidemiology, biostatistics, and occupational health. She undertook comparative studies of childhood asthma in Canada and Kenya, as well as investigating differences between the sexes in airway behaviour over the human life



Becklake described epidemiology as a "wonderfully useful and versatile discipline"

span; and studying clinical, public, and women's health, and research implications. She never lost touch with her roots in South Africa and argued for more to be done to fight HIV and tuberculosis in the developing world.

Becklake would end her academic career as an emeritus professor at McGill and as the recipient of numerous national and international accolades and awards for her clinical and political advocacy, her research, and her impact on patients, population health, and students. She was honoured with the Order of Canada and the Order of Quebec.

Legacy

Looking back, she described epidemiology as a "wonderfully useful and versatile discipline." Becklake was proud that her research had contributed to the global body of evidence showing that work related exposure to dusts, not only cigarettes, could cause COPD. Perhaps her greatest legacy was her influence on future generations of respiratory care physicians and epidemiologists.

Margot Becklake leaves her husband, Maurice McGregor; two children; four grandchildren; and a great granddaughter.

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OBITUARIES

Ronald Westerholm

Consultant psychiatrist
Cefn Coed Hospital,
Swansea (b 1939;
q University College
Hospital, London,
1965; FRCPSych, DPM),
died from cerebral
secondaries from lung
cancer on 4 May 2018



Ronald Westerholm ("Ron") was a consultant in general psychiatry from 1976 to 2001, but his enduring interest was in psychotherapy. As clinical tutor he gave his time generously to trainees and was easily available to them, not only for professional problems but for personal difficulties too. He also saw medical colleagues, both for serious personal difficulties and for psychiatric problems. He shouldered this taxing responsibility for many years when acting for the General Medical Council on the sick doctor scheme. In retirement he continued as a medical member of Mental Health Review Tribunals. Ron leaves his wife, Anne; two children; and four grandchildren.

Donald Williams

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Eileen Mary Steele

Clinical medical officer
(b 1927; q Royal Free
Hospital, London, 1950),
died from old age on
5 October 2018



Eileen Mary Selby Brown did hospital jobs around London and in Bournemouth until she married William Oliver Steele ("Bill") and went to the Malaysian state of Sarawak with him. She had four children and worked in the local clinics, helping with tuberculosis screening and diagnosis. On their return to England, Eileen worked as a locum general practitioner while Bill attended theological training. In 1966 the family moved to Norwich—the only diocese offering a large enough curate's house for a family of six. Eileen worked as a clinical medical officer around Norfolk, doing school medicals and other community work. She retired in 1987 but continued to work with children at Norwich prison creche and the local playgroup. Predeceased by Bill in 1984, she leaves four children and nine grandchildren.

Felicity Shaw

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Eric John Rowland Morgan

Consultant dental
surgeon (b 1923;
q Bristol 1954; FDS RCS,
MPhil, PhD), died from
pneumonia, old age, and
type 2 diabetes on
17 December 2018



Eric John Rowland

Morgan studied dentistry at Bristol University on a Kitchener scholarship and graduated with a BDS in 1946. He subsequently qualified in medicine, gained his FDS from the Royal College of Surgeons, and went on to have a successful career, building up the dental and oral surgery provision in south-west Wales, based at Morriston Hospital in Swansea. He was instrumental in setting up a new maxillofacial unit at the hospital. He retired in 1987 and returned to study, gaining both an MPhil and PhD in history from University College Swansea, then part of the University of Wales. Predeceased by his wife, Jean Elizabeth Morgan (née Morrell, a fellow doctor), he leaves a daughter (the author of this obituary) and two grandchildren.

Caroline Searing

Cite this as: *BMJ* 2019;364:l55

Peter J B Hubner

Consultant cardiologist
Groby Road and Glenfield
Hospitals, Leicester
(b 1942; q Middlesex
Hospital Medical School,
London 1965; FRCP,
DCH), died from cerebral
anoxia due to myocardial
infarction on 28 October 2018



Peter Hubner was appointed consultant cardiologist in Leicester in 1973. He joined a small team and set about developing it into a pioneering cardiac centre ultimately serving three million people across the East Midlands. He maintained high standards of history taking, clinical examination, and note making that he expected others in his team to match. However, he also recognised the importance of team building and was keen to develop a family atmosphere in his unit. In retirement he learnt foreign languages—particularly German. A committed Catholic, he undertook several pilgrimages to Lourdes. Peter Hubner leaves his wife, Sandra; three children; and eight grandchildren.

Richard Hubner

Cite this as: *BMJ* 2019;364:l127

Paul Bradley

Professor and director
of clinical skills Cardiff
University School of
Medicine (b 1955;
q Leeds 1978; MED,
FRCGP, FAcadMED,
FHEA, NTF), died from
squamous cell carcinoma
of the head and neck on 26 December 2018



Paul Bradley trained as a surgeon in Leeds before becoming a general practitioner at the Lache Health Centre in Chester. Thanks to Paul, it became the first paperless practice in the country. He was keenly interested in the potential of information technology on learning, and subsequently became a GP trainer, an associate adviser for IT in the department of general practice at the University of Liverpool, and national president of the Medical Computer Society. Positions at Liverpool, Dundee, and Plymouth's Peninsula Medical School followed before Paul became director of clinical skills at Cardiff University School of Medicine in 2010. He retired in 2012 on health grounds. He leaves Pam, his wife of 38 years.

Julie Browne, John Bligh

Cite this as: *BMJ* 2019;364:l52

Neville Keith Shinton

Consultant haematologist
and professor of
postgraduate medical
education (b 1925;
q Birmingham 1947;
FRCS, FRCP, MD, FRCPath),
died from complications
of peripheral vascular
disease on 9 September 2018



Neville Keith Shinton worked in Coventry and at Warwick University as a consultant physician, haematologist, teacher, and researcher, as well as sitting on many committees. The *Lancet* and *The BMJ* were among the journals that published his work on the treatment of B12 deficiency, anticoagulation with warfarin, haemoglobinopathies, blood cell counters, and laboratory standardisation. Although Keith stood down from his paid appointments at age 67, he never retired from medical work. Keith married Margaret Hyde in 1953. Their interests included the theatre, hill walking, travel, food, and gardening. Predeceased by Margaret in 2007, Neville leaves two sons and five grandchildren.

Roger Shinton

Cite this as: *BMJ* 2019;364:l117