

# comment

No amount of glossy reports or gadgets is a substitute for getting the evidence right to start with

**NO HOLDS BARRED** Margaret McCartney

## Technology and today's inverse care law

**A**s Jeremy Hunt left his position as England's health secretary he welcomed his successor with a tweet: "Couldn't ask for a better successor than @matthancock to take forward long term NHS plan with his brilliant understanding of the power of technology. The new NHS app will be in safe hands!"

The only thing I knew about Matt Hancock was that he already had an app of his own. This app was accused of basic privacy flaws (such as allowing access to photographs on a smartphone even when the user had denied this option: it has now been updated). We all make mistakes, we're all human, etc.

Hancock told an audience this year that "My GP is through the NHS on Babylon Health—it's brilliant." But, with £250 000 of taxpayers' money being used to evaluate the broader effects of this virtual service on NHS primary care, we don't know whether it's affordable or viable. And we (still) don't know whether the app that comes with the service is safe.

A senior NHS executive once told me that non-evidence based policy making was simply a side effect of a publicly funded NHS. Politicians get their way with daft ideas because they're elected, I was told, and if we want an NHS we must simply suffer the consequences of political meddling. But non-evidence based policy making is the ruin of the NHS and, unchallenged, is perfectly capable of finishing it off. There's a relation between wasteful policy making and resources. And, where resources are limited, who gets access to them?

We know that, too often, those most in need are the least likely to receive adequate care. This is the inverse care law, described in 1971 by Julian Tudor Hart, who died this month (see p 111), in one of the most profound and classic papers ever written about healthcare. It's worth committing one phrase from the paper's abstract to memory: "The availability of good medical care tends to vary inversely



with the need for it in the population served. This inverse care law operates more completely where medical care is most exposed to market forces, and less so where such exposure is reduced." People who get what they want don't necessarily get what they need; people who get what they need don't necessarily get what they want.

A further modern irony makes me worry about Hancock's enthusiasm for a technology whose risks and benefits have yet to be fully assessed. People are harmed by too much medicine. So, care led by demand makes people into patients when they can only be harmed, yet people who need to be patients can't access the care they need—the patient paradox. We waste resources while everyone's health gets worse overall.

The fact that health inequalities persist on such a grand scale despite the moral founding principles of the NHS—being free at the point of need—is shameful.

Technology should be a power for good, but for it to benefit patients we need to answer some important questions. Commissioned reviews get waves of publicity before they sink, forgotten. We need system change: every new policy must be interrogated for evidence of benefit and harm, opportunity cost, and the potential to benefit—or worsen—health inequalities.

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### COULD YOU BE THE NEW MARGARET McCARTNEY?

*The BMJ* is looking for a UK doctor to replace Margaret McCartney, who is stepping down from writing her column in September. You will be motivated, creative, and able to write engagingly on a range of issues relevant to practising UK doctors. You must be reliable and able to deliver to our weekly deadlines. This is a paid freelance position. Apply with a CV, covering letter, and a sample column of 450 words to Tom Moberly, UK Editor, *The BMJ* (tmoberly@bmj.com).

## Medicine's generation gap: let's stop comparing

Today's trainee wants exactly what doctors have always wanted: to see patients regularly, to diagnose, to treat, and to learn

I recently heard a group of consultants talking about the junior doctors of today. They were comparing modern day trainees to themselves at the same stage of training. They discussed how trainees often aren't present for interesting cases, how competency progression is slower than it used to be, and how trainees spend less time on site than they have in the past.

Much of what they said was accurate, but their language was highly critical. They also completely overlooked the systemic changes that have led to the differences in how junior doctors work now compared with previous decades—a common problem in discussions of medicine's generation gap.

It's become a truism to say that substantial intergenerational differences have evolved over the past 50 years. Nowhere is this more obvious than within healthcare, where we have different generations all working closely together. It's been pointed out that recent generations, although remaining career motivated, are far more demanding of flexibility and a work-life balance than previous generations, who are broadly seen as being hard working, possibly to the point of excess.

### Cultural differences

Yet to understand the modern trainee, we need to not only appreciate the emerging cultural differences between generations, but also the changes that have happened to both medicine itself



**The stress of long hours has simply been replaced by a different kind of stress: that of shorter but more intense working**

and our training over the same period of time.

It's true that junior doctors now, for better or worse, work shorter hours than their predecessors, but those hours are incredibly demanding. The treatment options for most conditions have evolved and, consequently, so too has the potential for doctors to get it wrong. The growth in treatment options for almost every condition means that decision making is more complex now than it's ever been—simultaneously requiring greater knowledge and increasing the chance of error, both of omission and commission. The stress of long hours has simply been replaced by a different kind of stress: that of shorter but more intense working.

## Outpatient clinics are ripe for reform

Traditional specialist outpatient clinics, on which we spend around 7% of the NHS budget, with more than 60 million attendances a year and great cost in time and travel to patients, are a prime example of an area that has been relatively neglected amid calls from politicians and the media to reform services.

Simon Stevens, chief executive of NHS England, believes that the current NHS outpatient model is “obsolescent.” Speaking at the NHS Confederation conference in June, he said, “Think of it from the patients' point of view, think of it from the clinical teams' point of view, discuss what a redesign would look like, and everything else follows from that.”

I'd say that this is a signal of intent, particularly as we expect



**Let's co-design the experience through patient's eyes**

NHS England to publish a plan in the autumn on how to make the best use of extra money. Additionally, NHS Improvement's “Getting it Right First Time” programme now has a theme on outpatients, and its chief executive, Ian Dalton, commented in June that modernising outpatient services should be a priority. The *Health Service Journal* reported recently that national NHS leaders in England plan to alter tariff payment structures for outpatients to incentivise different behaviour and models and to make the excessive use of clinics less attractive for hospital trusts.

The Royal College of Physicians is due to report, also in the autumn, on redesigning outpatient clinics

with environmental and financial sustainability as guiding principles. And *The BMJ*'s Tessa Richards recently wrote about the need to redesign outpatient services. A groundswell is apparent.

All of this thinking seems to show a broad consensus that we need to reassess which conditions or consultations really need secondary or tertiary care, as well as delivering more multidisciplinary team assessments and consultations in primary and community care settings. A greater focus on care planning, supported self care, and the use of shared (and patient held) interoperable health records could all reduce demand for face to face consultations. This is especially important for patients



And what of changes to training? For good reasons, we moved towards a system that is highly regulated and closely assessed, but this places heavy demands on doctors. Trainees are struggling to meet curriculum requirements because of a lack of time and opportunities set aside for this learning.

#### Simple repetitive tasks

I continually hear colleagues lament that time that could be spent on training and face-to-face patient contact is instead filled up with simple repetitive tasks that have less educational value.

Of course, it's not just junior doctors who are feeling the burden of increased bureaucracy. Senior clinicians are also overloaded, which means far less time

with multiple long term conditions who often see multiple specialists, sometimes on multiple sites, and then face follow-on referrals to other practitioners. It can be bewildering, time consuming, and costly, when they generally crave continuity of care.

Self-referral to specialist clinics when a need is identified, or referral from supporting nurse practitioners, may work better for patients. Self-monitoring, supported self-management, the use of patient-held interoperable clinical records, and remote technology may all help.

Follow-up could be done by email or phone rather than at hospitals. The journey to hospital sites can take hours out of patients' and families' days, implying that their time is less valuable than a clinician's.

for training, placing a strain on the trainee-trainer relationship. Where it used to be a common occurrence to sit down over a cup of coffee after a ward round or clinic to discuss interesting cases or career plans, this now has to be timetabled in at the last minute—if it's even possible at all.

Complicated and detailed reports have been written on how to improve training. Yet, fundamentally, the modern trainee wants exactly what doctors at this stage have always wanted: to see patients regularly, to diagnose, to treat, and to learn from those experiences.

If trainees can appreciate their abilities are different from those of equivalently experienced doctors a decade or two before, and if their supervisors can appreciate that trainees aren't to blame for that, then hopefully we can move the debate on to something more useful.

Rather than lamenting the fact that juniors aren't what they used to be, let's start thinking about what we can do to improve things within the constraints of the current system.

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When people do attend outpatient services on general hospital sites they need better information on what to expect and where to go: let's co-design the experience through their eyes. Let's provide patient-centred written, recorded, and electronic information, as even the best verbal communication can be forgotten and impossible to re-access.

The suggestions above may not necessarily be cheaper, and we need to have the right workforce and technology in place to make these changes; but outpatient clinics, which have run on the same basic model for so long, are surely now ripe for reform.

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## BMJ OPINION Ian Hamilton

### The health department should make medicinal cannabis rules

A new licencing procedure has been put in place that should allow "swift" access to medicinal cannabis products, according to the UK Home Office. This procedure places doctors at the centre, and makes clear that any doctor supporting such an application will take full responsibility for the risk of the cannabis product used to treat their patient's condition. Yet this will surely make many doctors think twice.



It is unlikely that most doctors will be familiar with the evidence in relation to cannabis and, even if they are, they'll be acutely aware that this is an emerging area of research, which so far has few high quality trials. Large scale trials are needed to provide evidence, but without funding for these we are left with personal stories and small scale studies.

But the problems don't stop with the licence application. Once the application is made, it is an expert panel that will make a recommendation to the home secretary as to whether each patient should be granted access to a cannabis product. This panel includes academics and clinicians—but noticeably no patient representative.

**The home secretary should hand over the licencing process to the health secretary**

This omission is perhaps a sign of the department managing this process, and where their priorities and experience lie. Health is not the primary concern of the Home Office, but it is for the health department, which is familiar with the concept of including patient expertise and knows how to assess evidence.

Three things need to happen now to improve the process outlined by the government:

First, the home secretary should hand over the process to the health secretary and his department. Second, a patient advocacy group should be invited to join the expert panel.

Third, health professionals should be given training so that they have the confidence to support patients in making a decision about whether they should use cannabis for their health condition.

So far, the licencing process looks challenging for doctors and patients. For the many people who believe that cannabis is the answer to their health problems, the reality of this new system looks likely to fall short of what they were hoping for.

Ian Hamilton is an academic at the department of health sciences, University of York



## 21ST CENTURY OUTPATIENTS

**Changing how we consult, communicate, and care**

Richards exhorts us to work differently, for poorly served patients and overburdened staff (Provocations, 9 June).

We see new approaches to healthcare interactions having several key components. Digital healthcare records shared between providers (“communicate differently”) and video consultations (“consult differently”) can help patients to work on a personally important agenda, track progress over time, and communicate with care teams.

Follow-up can be based on need; healthcare users benefit from the immediacy of digital access to answers to their concerns, gaining confidence in self management, reducing service use, and improving care experience (“care differently”).

Existing technologies enable personalised care at scale and new types of consultation and could support integrated healthcare systems. The benefits are clear—the challenge is to persuade more clinicians to use them. Many medical staff who become unwell don’t take the route through health systems that is offered to their patients. Are they “voting with their feet?”

R M Pope, consultant physician and director

S M Ali, general practitioner and director

C D Muir, chief technical officer

A A Schulte, chief executive, Dynamic Health Systems, Bradford

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## FUELLING ANXIETY

**WCRF’s campaign helps people take control**

McCartney says that the World Cancer Research Fund (WCRF) campaign fuels anxiety (No Holds Barred, 9 June).

The campaign is centrally linked to the WCRF’s updated recommendations and latest

## LETTER OF THE WEEK

**We should eat freshly cooked meals**

*The BMJ* says that more articles are planned for its series on nutrition (Editorial, 16 June). We have two concerns.

Firstly, all but one of the series’ leading authors are based in the US or UK. Dietary patterns in these countries are dominated by snacking and ultra-processed foods. Elsewhere, food systems are more diverse, with large sections of populations consuming fresh foods and regular freshly cooked meals.

Problems and solutions in contrasting food systems vary. Increased sales of “diet” sodas and “fibre enriched” snacks may be seen as a public health success or as further displacement of fresh foods and regular meals. Awareness of cooking and regular meals in the series is minimal; neither is discussed.

Secondly, the terms “processing” and “industry” are used loosely. We should focus on the processes that generate highly profitable formulations from cheap, industrial ingredients (such as modified starches and oils) made (hyper)palatable with added sugars, salt, colours, flavours, and other cosmetic additives. Transnational corporations with colossal sales and profits from intrinsically unhealthy ultra-processed products also require focus. The term “transnational corporations” is not used in any paper.

*The BMJ* should commission a further series with authors from countries where fresh foods and freshly cooked regular meals are common. This should generate policies and actions that further protect public health as well as culture, livelihoods, and rational food systems.

Carlos Augusto Monteiro, professor of nutrition and public health

Geoffrey Cannon, associate researcher

Jean-Claude Moubarac, associate professor

Renata Bertazzi Levy, associate researcher

Maria Laura Louzada, associate professor

Patrícia Constante Jaime, associate professor, University of São Paulo

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report on cancer prevention. In addition, WCRF has created a user friendly, online cancer health check (<http://wcrf-uk.org/cancertool>) to help people discover how their current lifestyle might be affecting their cancer risk and to support them should they want to change. All current campaign advertisements connect to it.

The adverts asking whether you are making yourself attractive to cancer are hard hitting. They make people look twice, subverting imagery from glossy magazines in juxtaposing flirtatious fashion models with foods and drinks that increase the risk of cancer.



But they also show how people can take control, starting with the online health check. They thus specifically improve knowledge, giving everyone the information to help reduce cancer risk.

Kate Allen, executive director of science and public affairs, WCRF, London

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## READMISSION RATES

**How do we interpret readmission rates?**

Readmission rates may be valuable indicators of hospital performance (Seven Days in Medicine, 9 June). But how much readmission risk is determined by patient factors, hospital factors,

and the quality of care after discharge is uncertain.

NHS Digital has been unable to publish readmission data since 2013 because of difficulties in establishing robust methods, but the NHS National Tariff asks commissioners to “set an agreed threshold [for hospitals] . . . above which readmissions will not be reimbursed.” The process of determining this threshold should be “informed by robust evidence,” when no such evidence exists. For example, the standard all cause 30 day rate may be less sensitive to variations in surgeon performance in orthopaedics than surgical readmission rates and is less sensitive to hospital performance than visits to emergency departments.

Penalising hospitals with unacceptable readmission rates may be unfair and masks a failure to understand a complex multifactorial problem.

Adam M Ali, Frank Knox fellow, Cambridge, Massachusetts  
Alex Bottle, reader in medical statistics, London

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## EMERGENCY ADMISSIONS

**How to avoid unnecessary emergency admissions**

Unnecessary admissions through emergency departments are substantial (Seven Days in Medicine, 16 June).

We need better preventive care outside hospital. Minimising disparities in the socioeconomic determinants of health in societies benefits overall health outcomes and reduces dependence on expensive hospital treatments. Competing demands and attempts to meet national emergency access targets, however, put pressure on emergency staff to admit patients who, after further assessment in the emergency department, could have been sent home.

A multifaceted approach is essential both to identify patients truly requiring admission and to manage patients better in

the community. It includes strategies such as higher acuity outpatient clinics, stronger community care, and enhanced programmes to reduce the risk of admission. Strengthening socioeconomic elements and supported discharge processes for patients who are admitted is crucial in minimising not only the cost of unnecessary emergency admissions but also the antecedent risks.

Vikas Wadhwa, clinical director of integrated services, Box Hill, Australia  
Morven Duncan, associate programme director, Box Hill, Australia

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## DRUG TESTING AT FESTIVALS

### Drug testing by the Loop reduces future harm

The artwork *Rush* by Chemical X (below) raises awareness of front of house testing of illegal drugs by the Loop (The Big Picture, 9 June).

The organisers of the Reading and Leeds Festivals rejected drug testing this year, fearing that it may mislead users. They also argued that determining the normal boundaries of strength or purity does not account for the quantities consumed or individual receptiveness. They opted for zero use of illicit drugs over testing that reflects the decriminalisation of possession.

This underestimates the core principle of pragmatic harm reduction. Hospital clinicians treat ageing, dependent drug users with chronic medical and social needs. Front of house testing is an opportunity to educate opportunistic, non-dependent drug users on safer behaviours during their first contact with drug specialists.



This strategy may help to reduce future drug related harm.

Where recreational drug use is endemic, the Loop is an essential safety net.

Ningyu Chai, foundation year 1 doctor, Guildford

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## DOCTORS' VULNERABILITIES

### Are we wrong to state the elephant in the room?

Sokol seems to glorify people who stay quiet and criticise those who state the elephant in the room (Provocations, 16 June).

Doctors' candour raises concerns. The GMC says doctors must promote a culture that allows all staff to raise concerns openly and safely.

Information presented in print media is often accessible to the public through social media such as Twitter. Would posting links to and excerpts from journal articles on Twitter be crossing the professional boundary?

If doctors were prohibited to speak out, would they then become invulnerable? It would just be hiding the truth. Does the #MeToo movement on social media make women look vulnerable? Rather, it shows courage against injustice and encourages others not to suffer in silence.

As a patient, I would rather have an honest doctor who tells me my expected waiting time in an overstretched NHS than a dishonest doctor who gives me false hope.

Eugene Y H Yeung, physician, Lancaster  
Cite this as: [BMJ 2018;362:k3117](#)

## IMPOSSIBLE ERRORS

### Co-conspirator in radiological errors

Maskell (Personal View, 16 June) fails to identify the co-conspirator in impossible errors caused by hindsight—the referrer. The quality of a radiological report is highly dependent on the quality of the referral, setting the context in which images are assessed.

The patient also has to wait

while the referrer considers the results and does the necessary thinking afterwards. Even if it were possible to spot every abnormality on imaging, the consequences for patients are likely to be mixed at best. With cross sectional imaging technology, the concept of VOMIT (victims of medical imaging technology) is well established.

An SBAR (situation, background, assessment, recommendation) approach to referral and more focus on the training of referrers must be part of the solution. Even better, when matters are complicated, going to talk to the radiologist will often help to refine the imaging protocol to interpret the result usefully.

Andrew Roberts, orthopaedic surgeon, Oswestry

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## NEW GP MODELS

### Devalue existing model to detriment of patients

The call for new general practice models (Feature, 9 June) comes when the service since 2010 has lost more than £3bn a year in funding and 1500 practices, with only 1500 centralised practices envisaged for England.

NHS England's promotion of disruptive innovation shows its disregard for practices failing.

The five core attributes for new models actually describe the existing model of general practice. Appropriately funded, GPs are ideally trained and predisposed to expand to manage the challenges of increasing comorbidity coterminous with social care needs.

Locally, we already have proactive care initiatives such as social prescribing, but we are as vulnerable as the next practice is to closure and are struggling equally in the current environment to provide care to patients.

General practice is the jewel in the crown of the best healthcare model in the world, yet obsolete? Devalue the model and you will lose its benefits for patients.

Nick Mann, GP, London

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## REORGANISATION OF THE NHS

### Constant restructuring is likely to continue

Oliver doesn't go back far enough on constant structural reorganisation (Acute Perspective, 9 June).

Modern reorganisation started with Kenneth Clarke's 1989 white paper seeking "less waste and greater efficiency."

Oxman et al discovered "many reasons for repeated reorganisations, the most common being 'no good reason.'" New leaders intoxicated with the prospect of change fuel perpetual cycles of "redisorganisation."

Hayes described the historic pattern of NHS "reform." The public want more than they will pay for. Politicians say they'll sort it when they get into power. Clinicians make the best of costly reform, but still the public want more than they will pay for.

Norman on the redisorganisation of the NHS wrote, "There is no perfect structure. Function is more important than structure. The focus should be on making the existing arrangements work. An important starting point is to learn to leave it alone."

That starting point has not yet been reached.

Neville W Goodman, retired anaesthetist, Bristol

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## Reorganisation costs lives

In the report of the Mid Staffordshire tragedy Francis pointed out that constant reorganisation (Acute Perspective, 9 June) meant that managers were unsure of their roles and did not perform effectively and that it was a contributory factor leading to patient deaths.

Reorganisation not only costs time and money and demoralises staff: it costs lives.

Chris C Gunstone, retired GP, Tynningham

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# Outcomes and quality: how does the UK compare and how can the NHS improve?

Azeem Majeed and colleagues examine what needs to be the focus of reform to better serve patients



## KEY MESSAGES

- Important health outcomes such as life expectancy and infant mortality have improved substantially in the UK since 1948
- In some key areas, such as child health outcomes and cancer survival, the UK has fallen behind other European countries
- New health policies should help the NHS to focus on improving health outcomes
- Continued progress is also needed on wider determinants of health such as poverty, housing, education, employment, and the environment

**H**ealth outcomes in the UK have improved substantially since the NHS was established in 1948.<sup>1</sup> For example, average life expectancy has increased by around 12 years from 68 to 80 years; and infant mortality has fallen nearly 90%, from 34/1000 live births to less than 4/1000.<sup>2</sup> The NHS performs well in many international comparisons on measures such as efficiency, equity, and access.<sup>3</sup>

Despite these achievements, problems with health outcomes remain.<sup>3,4</sup> Moreover, other European countries have also improved their outcomes in recent decades, often at a faster rate. Consequently, the UK now lags behind many other European countries in areas such as child health and cancer survival. Here, we review the quality of care and health outcomes in the NHS, focusing on areas that are important to patients, policy makers, and clinicians<sup>4</sup> and for which there are comparative international data.

### Global comparisons

#### Life expectancy

One important measure of population health, which is less prone to bias than some other measures, is a country's average life expectancy. For men, current average life expectancy in the UK (79.2 years) is around the average for countries in the Organisation for Economic Cooperation and Development (OECD). For women, the average life expectancy—although higher than for men—is below the average for the OECD (82.8 v 83.9).<sup>4</sup>

#### Child health

Improvements in child mortality in the UK have lagged behind those seen in many other European countries. For example, in 1961 the average infant mortality in the 28 current members of the EU was 36.2 per 1000 births, substantially above the level in the UK in that year (22.1); but by 2015, infant mortality in the EU28 had fallen to 3.6 per 1000, below the UK's 3.9 (figure). The absolute differences in childhood mortality

are now though quite small and may be better tackled through social measures—such as reducing poverty—than through health service interventions.

The UK also lags behind many EU countries in childhood mortality from potentially preventable causes such as meningococcal disease, pneumonia, and asthma. Although death rates in children from these conditions are low, the higher rates in the UK suggest that there may be problems with their recognition and management and the way in which health and social support for children is organised in the UK (for example, a lack of integration between primary care and specialist services); austerity in the public sector is another contributor to poor child health.<sup>5</sup>

The UK also lags on some of the important wider socially determined aspects of child health. For example, it has low breastfeeding rates and high rates of childhood obesity.<sup>6</sup>

### Management of long term conditions

The NHS generally performs well on this measure in adults. The Quality and Outcomes Framework is the largest primary care based pay for performance programme in Europe and has helped to improve prescribing in key areas, such as diabetes and coronary heart disease.<sup>7</sup>

For example, the UK has the highest per capita use of statins in Europe, important for the primary and secondary prevention of cardiovascular disease. It also has among the lowest rates for amputation of the distal leg in Europe (table 1). A 2014 study comparing 30 European countries ranked the UK fourth for the quality of diabetes care, behind Sweden, the Netherlands, and Denmark.<sup>8</sup>

### Cancer survival

The UK has long lagged behind comparator countries in cancer survival, and this difference has persisted in recent years despite the introduction of the “two week rule” requiring patients with suspected cancer to be seen by a



Table 1 | Age-sex standardised rate of lower extremity amputation in adults in selected European countries, 2015 (or nearest year)

Country	Rate/100000 population
Italy	2.7
Finland	2.8
United Kingdom	2.9
Ireland	3.2
Luxembourg	3.6
Sweden	3.7
Belgium	4.1
France	4.3
Netherlands	4.7
Poland	4.9
Spain	6.2
Lithuania	6.7
Latvia	8.1
Denmark	8.3
Germany	8.6
Estonia	8.9
Portugal	9.1
Austria	14.1

Source: OECD





**Table 2 | Colon cancer: five year net survival, 2010-14**

Country	% surviving five years
Belgium	67.8
Sweden	64.9
Finland	64.8
Germany	64.8
Italy	64.1
Austria	63.7
France	63.7
Spain	63.3
Netherlands	63.0
Slovenia	61.9
Denmark	61.6
Portugal	60.9
Ireland	60.5
United Kingdom	60.0
Estonia	58.4
Lithuania	56.9
Latvia	56.4
Czech Rep	56.1
Poland	52.8
Slovak Rep	51.7

Source: OECD.

A lot of focus in the UK is on avoidable admissions. As these mainly occur among frail, elderly people, insufficient emphasis may be given to morbidity among children, in whom long term conditions, unplanned admissions, and deaths are all less common than in older people.<sup>12</sup> Improving health outcomes also means reducing regional variations in the quality of care and health outcomes—for example, in mortality after hospital admission for hip fracture—which have persisted in the NHS ever since its foundation. Reducing these variations by improving outcomes in the worst performing areas would substantially improve the overall health outcomes achieved by the NHS.<sup>13 14</sup>

**How to achieve better outcomes**

The NHS benefits from single payer status, with funding coming largely from taxation and only a small proportion raised through user fees (such as prescription charges). This has allowed the NHS to control costs better than health systems in many other countries. It therefore scores well on international comparisons of health system efficiency but has not always performed well on outcome measures.<sup>3</sup> Its centralised structure means that innovations and changes in clinical services can take place relatively quickly. Nevertheless, the NHS does still have structural problems that are relevant to outcomes.

**Integration of services**

When the NHS was established, GPs remained independent contractors. Although they provided publicly funded primary care, they were not employed by the NHS. This resulted in a split between the provision of primary care and specialist services, which still remains. Despite decades of speaking about the importance of integration, it is difficult to see how the NHS can achieve this objective when hospitals and general practices remain separate organisations.<sup>15</sup> For patients, this split can be hard to understand as they generally see the NHS as one organisation and do not understand why its different parts are not more connected (box).

specialist within 14 days of their referral by a GP. In the CONCORD study of global trends, five year cancer survival in the UK was below that of many other European countries (table 2 shows figures for colon cancer).<sup>9</sup>

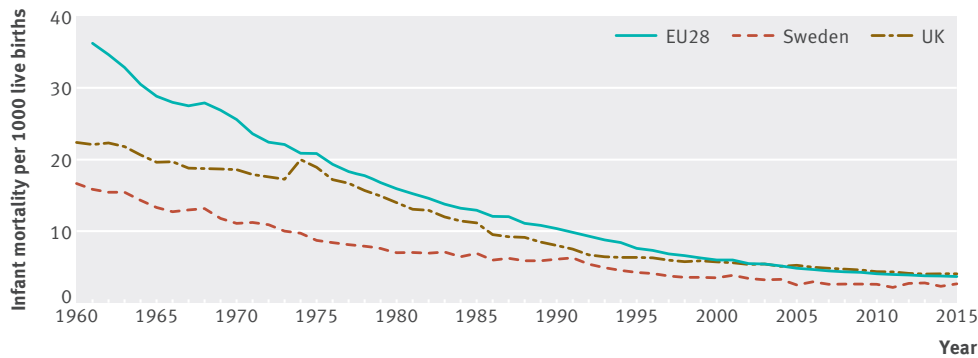
The underlying reasons for poorer cancer outcomes are complex. The explanations will include factors such as delayed patient presentation; delays in recognising cancer symptoms in primary care and referring patients to specialists; delays in completing specialist initiated investigations; and regional

**Politically expedient schemes that do not improve health outcomes, such as extended hours primary care services, should be jettisoned**

variations in the uptake of the most evidence based treatments.<sup>10 11</sup>

**Improving health outcomes—aiming above the European average**

The NHS needs to focus its efforts on improving health outcomes so the UK is once again above the European average for key indicators. All new health policies should be viewed through this objective, and politically expedient schemes that are not cost effective and do not improve health outcomes—such as extended hours primary care services—should be jettisoned.



Infant mortality (deaths/1000 live births) in EU28, UK and Sweden, 1960-2015

Bringing general practices and specialist services into one organisation will not be politically straightforward; nor will it be cheap.<sup>16</sup> Investment in integrated services will, however, ensure that people can obtain appropriate care promptly. This is particularly important for patients with long term conditions such as heart failure or chronic airways disease, for which complications and unplanned hospital admissions are common if exacerbations are not identified and treated quickly.

Another important target for integration is urgent care. Currently, patients with acute problems face a range of services to choose from. In England this includes, for example, NHS 111, out-of-hours primary care services, urgent care centres, emergency departments, pharmacies, community nursing services, and the ambulance service. Patients are often confused about which is most appropriate for their needs, which in turn leads to inappropriate use of some services (such as emergency departments and ambulance services). Integrating these services and having one single point of contact would benefit both the NHS and patients.<sup>17</sup>

### Specialist services

Specialist services also need increased investment if the NHS is to continue to improve the population's health status and health outcomes. On many important structural indicators—such as the number of hospital beds and diagnostic equipment—the UK lags behind most other European countries. The effect of this under-investment is now being seen, for example, in fewer patients meeting targets for cancer treatment, increased pressures on emergency departments, and lower public satisfaction with the NHS.<sup>18</sup>

### Tackle health professional shortages

The UK has shortages in key medical specialties such as general practice, paediatrics, and emergency medicine as well as of health professionals such as nurses and therapists. The UK has around 2.8 doctors per 1000 population, which is below the European average. The UK also has fewer nurses per 1000

### Quality of NHS care—a patient's perspective

“I have been pleased at the prompt access to care when needed. I have had many positive interactions with healthcare professionals and staff at the surgeries and clinics and I have been grateful for the opportunity to be involved in decision making about my care and treatment plans.

Based on my experience, one area that could use attention is the communication between specialists and my GP surgery. As a specific example, I was referred to a specialist for a suspicious mole. Although an appointment was made quickly for me and the mole removed, I did not hear anything about the results for a couple of months. My GP was unable to assist as they did not have access to the information, and the delays caused me anxiety. I was unsure who to contact for the results and eventually called the Patient Advice and Liaison Service to assist me in chasing the results. Perhaps my expectations for receiving the results were unrealistic, but enhanced communication in this area (or between the specialist and my GP) would have improved my experience of the NHS.”

**“One area that could use attention is the communication between specialists and my GP surgery. The wait for results caused me anxiety”**

population (7.9) than countries such as Germany (13.3) or Switzerland (18).<sup>18</sup> Although the government has promised to tackle the shortages, little progress has been made; in the past few years, for example, the number of NHS GPs in England has declined further.<sup>19</sup> Given that these shortages will present for some years to come, the NHS needs to look at ways in which health professionals skills' are used appropriately, such as by reducing the low value administrative work they undertake.

### Improved use of digital technology

The rapid advances we are seeing in information technology present an opportunity for the NHS. Through the internet and websites such as NHS Choices, patients now have easy access to medical information for self care. Developments in artificial intelligence (AI) are also leading to new routes for accessing medical and health promotion advice.

In the longer term AI may be used to support the work of doctors and other health professionals in areas such as radiology and dermatology and to provide tools to support the further integration of health services—for example, better sharing of medical records between health services and with patients.

One caveat about digital health is the gap between the postulated and empirically demonstrated benefits of these technologies. There are few well designed studies on the risks of implementing these technologies or on their cost effectiveness.<sup>20</sup>

### Reduce health inequalities

Many of the poorer health outcomes in the UK can be explained by the wider determinants of health such as housing, employment, poverty, and social support.<sup>21</sup> These factors will be particularly important for groups such as children and elderly people, for whom NHS based initiatives by themselves will not be enough to improve health indicators.

### Conclusions

The NHS, despite its many achievements, lags behind health systems in similar countries in achieving good population health outcomes. Better performance will require a concerted focus on the quality of care, including a much greater emphasis on improving outcomes when planning and implementing health services. Improved integration of primary and secondary care, investment in specialist services, and addressing the shortage of health professionals may help narrow the outcomes gap.

The additional investment the government has recently promised for the NHS in England (along with investment for the NHS in the devolved nations) is welcome.<sup>22</sup> However, we wait to see if this extra funding will be sufficient to meet the needs of the UK and whether lower rates of public spending in other areas—such as housing and education—lead to health outcomes in the UK falling further behind those in other European countries.

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# Julian Tudor Hart

Visionary general practitioner who introduced the concept of the “inverse care law”

Alan Julian Macbeth Tudor Hart (b 1927; q St George’s Hospital, London, 1952; FRCGP, FRCP), died from ischaemic colitis with secondary bowel perforation on 1 July 2018

In 1971 a GP from a Welsh mining village submitted a paper to the *Lancet*. More than 45 years later doctors, researchers, and politicians still quote Julian Tudor Hart’s “inverse care law.” It states: “The availability of good medical care tends to vary inversely with the need for it in the population served. This inverse care law operates more completely where medical care is most exposed to market forces, and less so where such exposure is reduced.”

It’s fitting that Tudor Hart, a fierce critic of market forces in medicine, should die aged 91 on the 70th anniversary of the NHS, which he defended so passionately.

## Radical beginnings

Tudor Hart was born in London in 1927 into a communist medical family. He once described home as something of a “transit camp for antifascist refugees” and said that his father gave him works of Marx to read at school.

In 1940, aged 13, he and his sisters took refuge in Canada from the second world war with their grandfather, the artist Percyval Tudor-Hart. On returning to London in 1945 he did his national service, but a spinal anomaly meant that he was discharged early in 1946.

Tudor Hart found his vocation in medicine and politics, describing the NHS as “a major experiment in democratic socialism.” He studied at Queens’ College, Cambridge, in 1947 and then at St George’s Hospital in London. He worked as a GP in Notting Hill, London, for five years and by this time had three children.

In 1958 he took a paediatrics post at the Royal Hammersmith Hospital, and he then worked as a registrar for Richard Doll at the London School

of Hygiene and Tropical Medicine. He was interested in epidemiological research, and its principles underpinned all of his later work. In 1960 he moved to Cardiff to work for Archie Cochrane at the Medical Research Council Epidemiology Unit.

Tudor Hart’s first marriage had ended, but in March 1961 he met Mary Thomas, whom he married in 1963. Theirs was a very successful partnership, both personally and professionally, and Mary was vital to his projects and writings. They had three children.

## The Glyncoerrwg years

In 1961 Tudor Hart bought a rundown general practice in Glyncoerrwg, a coal mining community in the Afan Valley. Although he later went into partnership with Brian Gibbons (who became the Welsh health minister), he was on his own to begin with. He was keen to get a holistic picture of his patients’ health. The methods he had learnt from Doll and Cochrane helped, and Glyncoerrwg became the Medical Research Council’s first research practice. From 1964 to 1985 Tudor Hart audited 500 deaths, which he described in a paper for *The BMJ*.

He became the first GP in the UK to routinely measure blood pressure. He measured it in everyone in Glyncoerrwg down to the last inhabitant—who turned out to have the highest reading—and he wrote it up in what would be the last single authored paper on blood pressure for the *Lancet* in 1970.

Local cooperation was essential, and working in partnership with patients was a guiding principle for Tudor Hart. He formed a health committee in Glyncoerrwg in 1975, which met monthly and discussed public health issues such as smoking. The preventive health strategy paid off. In 1991 *The BMJ* published a study that found death rates in Glyncoerrwg to be 30% lower than in the neighbouring village, Blaengwynfi.



**His health strategy paid off: a study found death rates in Glyncoerrwg to be 30% lower than in the neighbouring village**

## Politics, writing, and the bigger picture

Politics was woven into the fabric of Tudor Hart’s being, and he stood as a Communist Party candidate for Aberavon three times. He switched to supporting the Labour Party, and, although unhappy with Tony Blair, he was heartened by the election of Jeremy Corbyn.

After retiring from clinical practice in 1987, he moved to the Gower Peninsula, where he grew vegetables, illustrated Christmas cards and books for his grandchildren, and even created a scale model of HMS *Beagle*. Mainly, however, he was writing and speaking. Described as “absurdly creative and hardworking,” he was prodigious in his output, which included more than 350 peer reviewed papers in all, as well as many books—most famously, *A New Kind of Doctor* and *The Political Economy of Health Care*. He held many awards and was a founder member of the Socialist Medical Association and honorary president of the Socialist Health Association. In 2006 he was awarded the Royal College of General Practitioners’ discovery prize for research in primary care.

Predeceased by a son, Julian Tudor Hart leaves Mary, five children, and 16 grandchildren.

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WHO

**BMJ OPINION**

**Achieving universal quality healthcare coverage**

High quality healthcare involves the right care, at the right time, in the right place, and by the right care provider, while minimising harm and resource waste, and leaving no one behind. Unfortunately, many countries fail to meet these requirements.

Poor quality healthcare prevails in all levels of economic development, manifesting every day in inaccurate diagnosis, drug errors, inappropriate or unnecessary treatment, and inadequate or unsafe clinical facilities or practices. The implications are devastating for patients and their families.

Improving access to care, especially for the poor, through universal health coverage is not enough to achieve better health outcomes. This is a simple and powerful reminder from the first global report coauthored by the World Health Organization, the World Bank Group, and

the Organization for Economic Cooperation and Development.

The report calls for urgent action from governments, clinicians, patients, civil society, and the private sector to rapidly scale up quality healthcare services for universal health coverage. While high quality healthcare for all may seem ambitious, it can be achieved in all settings with good leadership, robust planning, and intelligent investment. For example, in Uganda a model involving citizens and communities in the design of healthcare services has improved a range of indicators, including a 33% reduction in child mortality. Around the world, lessons abound on what works and what does not, providing a rich foundation from which to rapidly scale up a quality revolution.

Of course, quality care requires investment, but it is affordable, especially when the costs and

consequences of poor quality are considered. Many of the interventions to improve quality—checklists or basic hygiene, for example—are inexpensive and within reach for all countries. The returns are plentiful—better individual and population health, more productive workers, and pupils that perform better in school and will better contribute to the economy.

In other words, investment in quality healthcare contributes to growth in human capital and economic development. So striving for universal quality health coverage is not just an investment in better health—it is a commitment to building a healthier and more productive society.

• This extract comes from one of our most popular BMJ Opinion articles this month, written by authors from WHO, the World Bank, and the OECD. Read it in full at [http://bit.ly/quality\\_UHC](http://bit.ly/quality_UHC)

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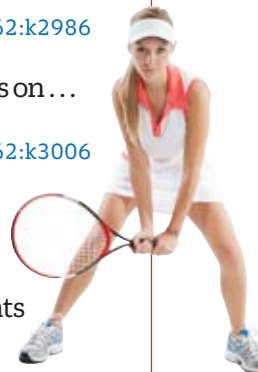
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**Caring about opinions**



“It’s when teams own their own feedback, and their response to it and feel responsible for doing something with the feedback—that’s when you get the culture shift and that’s when you get the service improvements. If feedback is seen as something

that’s owned at the top of the organisation, and not really anything to do with me and my service, then of course it won’t create much impact.”

James Munro, former doctor and current chief executive of Care Opinion, talks to *The BMJ’s*

Tessa Richards about how his organisation supports online dialogue between patients and providers of care, and how this feedback can bring about change on the ground.

Listen to the podcast in full at [http://bit.ly/munro\\_podcast](http://bit.ly/munro_podcast)