comment

TAKING STOCK Rammya Mathew

Should GPs be more like hospital specialists?

Earlier this year the GMC unveiled plans that would see GPs finally included on the specialist register, recognising that we're specialists in general practice. The Royal College of General Practitioners and the BMA have actively campaigned for this, so perhaps I should be more pleased to hear this news.

Like most GPs, however, I've never been overly bothered by airs and graces. This change in professional status may possibly attract more doctors into general practice, but it's not going to make the day job any easier—and that's where most of us want to see change happen.

But what if, alongside the change in status, we also adopted a style of working more in line with that of hospital specialists, where we spent much more time working at the top of our licence and substantially less time being community house officers? Could all GPs have a dedicated team working for them, including not only many more trainees but an entire multiprofessional team? Instead of doing the bulk of the clinical work in our practices, and doing it largely independently, could we adopt a much more consultative style of working, whereby the expert medical knowledge of a GP is used to support difficult decision making and provide a senior opinion?

As a junior doctor working in a hospital I spent my days scribing, filling out request forms, delivering these forms around the hospital, updating patient lists, reviewing blood tests for patients under my consultant's care, and presenting patients' histories on the ward round so that my consultants could make quick decisions without having to elicit all of the information themselves. But as a GP I feel guilty for even asking a medical student to fill out a patient's demographic details on a urine specimen pot. (Is this just me?) Somehow, somewhere, we seem to have got the balance wrong in terms of ensuring an adequate support system around GPs for them to do their jobs effectively and efficiently.

If you speak to GPs you'll find that it's not uncommon for them not to leave their room during the working day and to have very little conversation with colleagues. And although we have practice meetings where we can discuss clinical cases, GPs make most clinical decisions on their own and with little input from a wider team.

When I look back at my days in hospital medicine, one of the things I miss most is the camaraderie. A team based approach has the potential to make general practice not only a safer and more sustainable career but also a more enjoyable one. So, instead of being consultants just by name, I want to see us being consultants by job description too.

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Looking back at my days in hospital medicine, one of the things I miss most is the camaraderie

PERSONAL VIEW Roopa McCrossan and Clara Munro

A new deal for surgery—but what does it really mean?

A plan to tackle the waiting list is welcome, but a guarantee to provide training for a workforce to enact it is the essential next step

The pandemic has caused the largest ever waiting list for NHS treatment, with 4.95 million people waiting—430 000 of those for over a year. The Royal College of Surgeons of England is calling for action with its 12 point plan, a "new deal" to support elective surgical services. It has requested £1bn a year to enable trusts to set up "clean" elective surgery hubs using existing hospitals where there would be no interruptions to elective surgical services from pandemic surges or winter bed pressures.

While the plan is welcome, some may be sceptical until there is a hard commitment to the changes required to carry it out.

The pandemic has shown that the greatest resource of the NHS is its staff. Many of those redeployed to intensive care were theatre staff. They are exhausted, and pushing them to their limits to increase elective surgical capacity is not sustainable. While increasing the workforce seems more logical, trained staff cannot be magicked up overnight. Analysing anaesthetic and surgical higher specialty training numbers reveals falling numbers of funded training places, despite consultant workforce census

in these specialties showing large numbers of funded, but unfilled, consultant posts that existed pre-covid. High quality trainees exist. An estimate from the Royal College of Anaesthetists showed nearly 700 core trainee anaesthetists were unable to secure higher specialty jobs in the last recruitment round.

The report calls for workforce expansion, but this is not enough without a plan to deliver it. If we are to continue to tackle this backlog in six years' time, we need surgical, anaesthetic, operating department, and nursing training numbers to be expanded now.

Bed pressure

More detail is needed about how hubs will work. Many trusts have tried "clean" sites for elective operations. While this works to reduce the risk of contracting infection, it does not eliminate the main risk to elective operating: bed pressure. It is difficult to justify earmarking beds for relatively well postoperative elective patients if there are unwell patients as a result of a pandemic or winter pressures.

Limited procedures in relatively fit patients could take place in surgical hubs, but major surgery such as a cancer operation often requires post-anaesthesia, high dependency,

We need surgical, anaesthetic, operating department, and nursing training numbers to be expanded now

or intensive care capacity and this may be challenging in terms of both physical space and, more importantly, staffing. One of the biggest challenges of the pandemic was staffing existing intensive care units. And that was without creating more beds run by exhausted staff who are now burnt out. The incidence of mental health problems in intensive care staff is particularly high.

The model that we have for elective surgery in the UK has long needed modernising and the pandemic has presented us with an opportunity to do this. The problem with the system, like many that run within the NHS, is the reliance on running at 100% capacity. Resilience and flexibility need to be built into any plan. If the pandemic has taught us anything it is that the NHS needs more breathing room—in bed and staff numbers.

Becoming more comfortable with a short term loss of efficiency is important when we consider training. Overbooking lists and using experienced staff to get through the backlog quickly might get through the most

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BMJ OPINION David Wrigley

Don't call us resilient
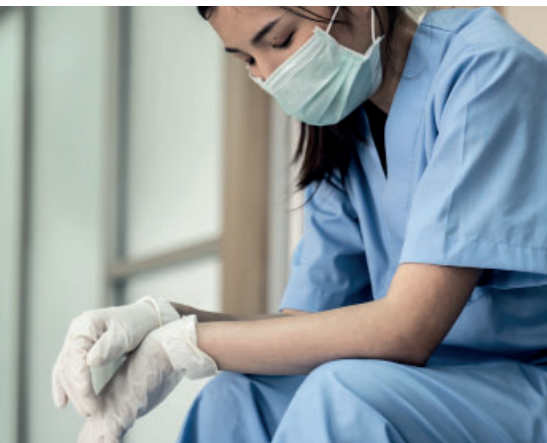
I was pleased to see that the recent report from MPs on the Health and Social Care Committee on workforce burnout and resilience in the NHS and social care warned against the notion of individual resilience. This concept ignores that the system just isn't working and places pressure on doctors and healthcare staff to work even harder.

The report made for difficult reading and added to mounting evidence that the health and social care system is in desperate need of repair. Even before this pandemic, far too many doctors and health and social care staff were experiencing burnout and unnecessary levels of stress. Underfunding and staff shortages meant that staff were able to provide patients with care only by persistently going above and beyond.

The pandemic hit the NHS with such force

"NHS heroes" aren't superhuman, but people holding up a broken system

that it nearly toppled it. The reason it wasn't completely overwhelmed was because its staff worked harder than ever. With this doubling down came a predictable knock-on effect: staff sacrificed their own wellbeing. This was apparent early in the pandemic when the BMA's mental health and wellbeing support services experienced a 40% increase in their use over March, April, and May 2020.

"NHS heroes" aren't superhuman: they're people who have balanced their personal traumas—such as the loss of family members, friends, and colleagues—with an unmanageable workload, holding up a broken system, all while being labelled "resilient." It's no surprise that today we're

patient operations in the next year, but this is short sighted—we need competent surgeons, anaesthetists, and theatre staff in the years to come. A loss of efficiency now will translate to sustainable working in the future.

Most importantly, we must not lose sight of what five million people on a waiting list really means. The psychological impact on those patients cannot be underestimated. This is impossible for most surgeons and anaesthetists to forget. Instead of twiddling their thumbs waiting for elective surgery to restart, they are continuing their clinics and seeing rising demand in emergency care from patients the elective waiting lists have not got to in time. Being forced to cancel patients because of a lack of intensive care beds, compounded by the guilt that they cannot help the people they committed to heal, causes moral injury.

A waiting list plan is welcome, but a guarantee to provide training to enact the plan in a sustainable way is the essential next step.

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seeing more staff experiencing burnout, stress, and mental health trauma—including post-traumatic stress disorder, which is increasing at an alarming rate.

We can't forget the figures from the BMA's regular surveys undertaken during the pandemic. These show that thousands of doctors are planning to leave the NHS because of depression, anxiety, stress, burnout, and other mental health conditions.

The MPs' report has the potential to go a long way in safeguarding staff, but it needs the government to take action now. Staff have held up a broken system for far too long; it's time for the system to support them. The government must care for those who care for the public, to ensure patients get the best possible care—which is in everyone's interest.

David Wrigley is the BMA's wellbeing lead

Nosocomial covid is in all our remits

Last month the *Guardian* reported that, since March 2020, "Up to 8700 patients died after catching covid-19 in English hospitals." The question is whether any of these cases could have been avoided and what we need to do better in future, rather than just apportioning blame.

The story was based on freedom of information requests sent to all 126 acute hospital trusts, with 81 replying. A total of 32 307 patients admitted with other conditions had contracted covid while in hospital, and 8747 (27%) died within 28 days, showed the trusts' figures.

In response, NHS England stated that the root cause was a rising community infection rate, adding that hospitals outperformed other settings in preventing and controlling outbreaks. My immediate reaction as a doctor who looked after busy acute covid wards is to defend colleagues. We must, however, acknowledge how this death toll looks to people outside the NHS, including bereaved families and survivors.

We should bear in mind some hospitals had much lower rates of hospital acquired infections than others. There's also evidence from independent reports by the Healthcare Safety Investigation Branch and the Health and Safety Executive of some basic failings in procedures for preventing nosocomial spread. Failings in the quality and supply of PPE or rapid access to mass testing have also been amply documented.

Hospitals undoubtedly introduced substantial changes to identify covid patients, to divide streams into high and low risk; to cancel elective procedures, tests, and operations; to restrict visiting;

We must acknowledge how this death toll looks to people outside the NHS

and to move much outpatient work online. But outbreaks still occurred, and patients were moved repeatedly between wards, sometimes before covid could be excluded, or they were placed with infected patients.

The UK has among the fewest hospital beds per 1000 of the population among developed countries, and our hospitals routinely run at over 90% capacity, although bed occupancy actually fell during the first few months of the pandemic because elective procedures were cancelled and some acute non-covid patients stayed away.

We had guidance on PPE that focused on aerosol generating procedures, even though we now know covid has airborne routes and staff working in general wards were at much greater risk than staff working with such procedures. We have a relatively low percentage of single side rooms in all but the newest facilities, with bays shared by four to six patients. Ventilation is often suboptimal. Staff areas for meeting, rest, or eating are inadequate and crowded, and staff share computers and desks.

Many of the factors behind hospital acquired covid are beyond the remit of overstretched clinical teams. Many of the solutions lie elsewhere. But we all—from government to NHS trust managers down to the shop floor—own some of the solutions, and we have a responsibility to do what we can and to implement lessons from the past 14 months. If we don't, we risk future outbreaks surging through hospitals, putting patients at avoidable risk.

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When did you last see your doctor?

GPs are feeling tired, bruised, and battered. The promised increase in GPs hasn't materialised, but the demand for our care is rising inexorably. Despite a 15% year-on-year increase in appointments, repeated howls of protest in the popular press about our unavailability are not helped by recent direct communications from NHS England. There's clearly a growing mismatch between supply and demand.

Some of this demand can probably be attributed to electronic consulting: if it's possible to ask your doctor any number of questions online, the threshold for requesting help may be lowered. We may also be uncovering unmet need: no doubt some patients with serious medical problems who have failed to get through on a busy switchboard (having given up when they were 15th in the queue) now manage to contact the practice online.

Why else has demand increased? Partly it's because people held back from consulting at the height of the pandemic, either because they regarded their symptoms as less important than covid or because they were afraid we'd ask them to attend, potentially putting them in an unsafe situation. For the past year we've mostly been speaking to patients on the phone, or sometimes by video call, and inviting them in when we need to.

For some patients this change in practice has been ideal, removing the need to travel and sit in the waiting room: it works well for a simple problem or for an ongoing one already discussed with a familiar doctor. If the diagnosis isn't in doubt and there's no need for a physical examination, many patients find few drawbacks to consulting by phone. But most of our work isn't like this, and remote consulting feels to me like doing medicine with a blindfold on and with one hand tied behind my back.

I'm sure I'm safe enough most of the time, but I feel less confident in my communication, diagnoses, and management. For many patients too, it's less satisfactory: when I've physically examined a patient's chest it's easier to reassure them they don't need antibiotics for their cough. I may be able to reach that conclusion on symptoms alone, but will my patient have faith in my assessment?

I wonder how much of the rise in patient demand is because people are less likely to feel as though they've been thoroughly assessed and had a definitive response in a remote appointment? If they don't feel seen, they may continue to call until they're offered a face-to-face appointment.

We've opened up so patients can soon book directly for in-person appointments again, although we may have to reverse this as the next wave accelerates. Meanwhile, our hospital colleagues are mostly still working by phone—and they seem immune from criticism on this point, which feels a little unfair.

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Remote consulting feels to me like doing medicine with a blindfold on
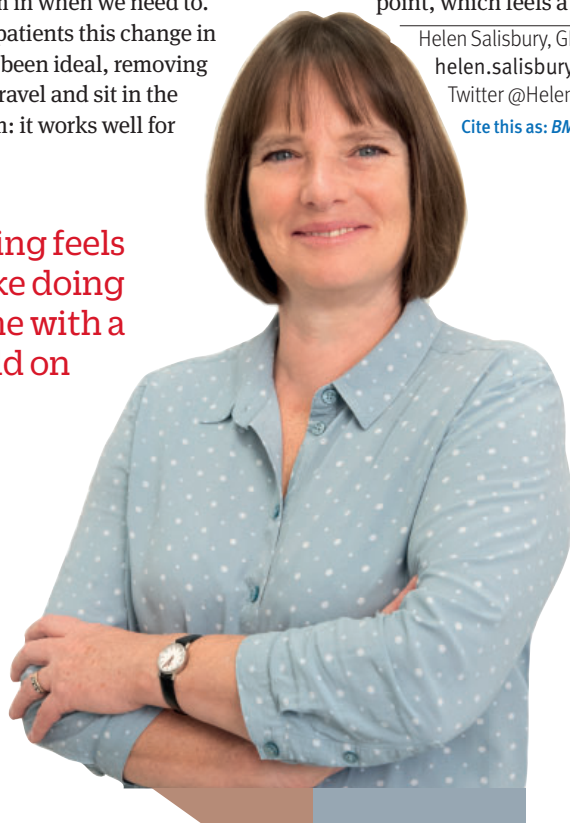
Are men worse at sounding the alarm on mental health?

Our Wellbeing podcast has featured doctors sharing stories of their mental health for a while, but a theme started to emerge: women would come on and talk about their own difficulties, while men would talk about other people's. Zeshan Qureshi, a consultant in paediatrics, author, and TEDx talker, joins the latest podcast episode to explore this pattern.

He talks about his struggles with his mental health and why he initially felt unable to let colleagues know how he was feeling. "For me, my definition in work was quite clear: I was there as the healer, I was there to look after the children, and my needs came secondary. As long as I could physically walk and talk, then I got on with my job. I'm really proud of the quality of care I can deliver, but I just wish that I'd recognised I need to deliver that quality of care to myself as well."

He also explores what would help those who are struggling to open up and feel supported. "One thing I really want to hammer home is that we often think individuals need to take responsibility for their mental health in work, but the evidence is quite clear that institutional changes and interventions are far more powerful.

"If you take a step back, what we're doing is something very unnatural. I've done night shifts where two babies have died—I slept for a few hours, then did six further night shifts and just got on with it, with no one to talk to and no discussion. We live in a system that significantly increases our mental health risk, and that comes with the responsibility of that institution to support our mental health through the problem."

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Edited by Kelly Brendel, deputy digital content editor, *The BMJ*

Explaining covid-19 performance: what factors might predict national responses?

Fran Baum and colleagues discuss how and why governments' reactions to this pandemic differed from predictions and what lessons there are for being better prepared for the next

Covid-19 has exposed and exacerbated existing flaws in public health systems around the world. Shredded social safety nets and underinvestment in healthcare systems, compounded by conflicts of interest, dismissal of scientific evidence, and failures of political leadership, meant many countries were unprepared to deal with the covid-19 pandemic and vulnerable to the next one. Important lessons can be learnt from the various national responses to covid-19 to inform preparedness for future waves or the emergence of new pandemics or epidemics.

The Global Health Security Index (GHSI), which measures preparedness for pandemics or epidemics, published its scores in October 2019, just before the covid-19 pandemic was declared.[1] The US and UK scored highest on the GHSI, but both countries have done spectacularly badly in response to covid-19, whether measured in deaths or economic damage. The Epidemic Preparedness Index,[2] also published in 2019, grouped countries into five levels of preparedness, and also placed the US and the UK and others that have fared poorly in the covid-19 pandemic in the highest categories. However, to understand how to assess

The US and UK scored highest on the Global Health Security Index but have done spectacularly badly, measured in either deaths or economic damage

pandemic preparedness more accurately, we specifically focus on the GHSI because it includes a wide range of measures and comprehensive country data collection.[3]

The GHSI takes account of qualitative and quantitative data intended to measure the capacity of 195 countries to deal with disease outbreaks. Based on an expert assessment of structures and processes, the GHSI includes indicators related to geopolitical considerations, national healthcare capacity, and political and economic risk factors. It assesses countries using 140 questions across six domains: prevention, detection and reporting, response, health system, compliance with norms, and risk of infectious disease outbreaks. Scores range from 0 to 100, and a higher GHSI score indicates better preparedness.

The 2019 GHSI report provided prophetic recommendations for "a fast-spreading respiratory disease agent that could have a geographic scope, severity, or societal impact and could overwhelm national or international capacity to manage it."[1] The authors described "severe weaknesses in

country abilities to prevent, detect, and respond to health emergencies; severe gaps in health systems; vulnerabilities to political, socioeconomic, and environmental risks that can confound outbreak preparedness and response; and a lack of adherence to international norms."[1] The average overall GHSI score for the 195 countries assessed was 40.2 out of 100, and 51.9 for the 60 high income countries. Less than 7% of countries scored in the highest tier for ability to prevent the emergence or release of pathogens, and less than 5% of countries scored in the highest tier for ability to respond rapidly to and mitigate epidemic spread.[1]

After the US and UK, The Netherlands, Australia, Canada, Thailand, Sweden, Denmark, South Korea, and Finland were the highest scoring countries on the GHSI. A higher GHSI score would be expected to be associated with lower measures of covid-19 burden. However, the GHSI was much less accurate when assessing individual countries. In April 2020 the GHSI score was positively associated with covid-19 cases and deaths, but not related to covid-19 testing rate. As at 19 October 2020, national cumulative death rates from covid-19 were positively related to GHSI score (r=0.35, P<0.001), indicating the persistence of the association (figure).

KEY MESSAGES

- The Global Health Security Index predicted that the world in general was not well prepared for the pandemic but did not predict individual country preparedness
- Ten factors seem to have contributed to the index failing to predict country responses, including overlooking political, economic, and social contexts and the role of civil society
- Future assessments of pandemic preparedness need to take these 10 factors into account by adopting a systems approach which enables a focus on critical system components
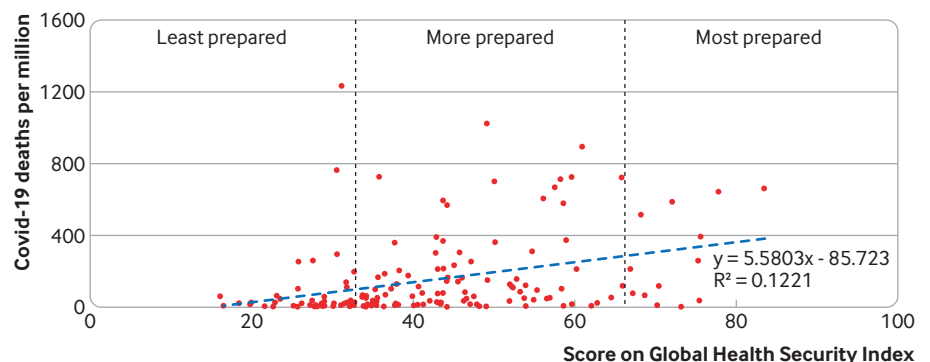
Relation between Global Health Security Index score and number of covid-19 deaths up to 19 October 2020 (Our World in Data: https://ourworldindata.org/coronavirus)[1]

WHY DIDN'T THE GHSI PREDICT NATIONAL PERFORMANCE MORE ACCURATELY?

We propose 10 factors that may account for the failure of the GHSI to predict performance in the covid-19 pandemic and provide guidance for the development of a new index on preparedness.

1. Limited consideration of globalisation, geography, and global governance

The GHSI measures the performance of individual nations. However, given the increasingly globalised and interconnected social and economic world, viruses can spread rapidly despite seemingly good preparedness. The GHSI did not consider the importance of geography. For example, island nations such as Australia, New Zealand, and Pacific island states could close their borders in an attempt to prevent the virus from entering the country. The GHSI also did not consider the contribution of regional organisations (eg the European Union) or global organisations (eg the G20) to coordinating national responses. Failure to coordinate efforts to stem the spread and impact of the virus has yielded considerable chaos, including shortages of critical commodities such as personal protective equipment, poorly managed population movements, and lack of standardisation of key trade policies. Thus, disease control may be only as effective as practices within the poorest performing countries.[4]

2. Bias to high income countries

Critics of the GHSI argued the emphasis on biosafety over other capacities reflects a bias to high income countries.[4-6] For example, there is tension between biosecurity focused, authoritarian approaches to public health and more comprehensive, social determinants driven, participatory and rights based approaches, which require effective community participation.[7] The pandemic has highlighted the importance of the latter and the need to involve a broad range of experts from different backgrounds, including civil society, to develop and implement an effective response to a public health crisis.

3. Failure to assess health system capacity

Nations with universal publicly funded health systems that were not financially distressed and had strong public health capacity seem to have been relatively well prepared for covid-19: these include Thailand, Vietnam, Australia, and New Zealand. Conversely, the pandemic highlighted the weaknesses of fragmented systems relying on for-profit healthcare providers, such as in the US. Covid-19 exposed fragile and chronically underfunded public health systems and weak pandemic preparedness activities. England outsourced testing and tracing to private companies with no relevant experience, which created a fragmented system separate from existing health services and those experienced in contact tracing in local government or sexual health clinics. The tracing system in particular performed poorly, using a telephone based system that ignored the importance of the local knowledge of contact tracers, termed "shoe leather epidemiology."[8] This hampered efforts to control the outbreak. These factors also highlight the importance of being able to draw on a well functioning public health system.[9] Vietnam, whose public health system emphasises care, solidarity, and community responsibility, has had low covid-19 cases and death rates although it scored low on the GHSI (50th place; score 49.1).

The politics of world leaders such as (from left) Jacinda Ardern in New Zealand; Jair Bolsonaro, Brazil; Donald Trump, US, and Boris Johnson, UK, impacted on on how effectively their countries responded to covid-19

4. Role of political leadership

The GHSI measures trust in government, but it overlooked the role that political leadership and ideology plays in shaping public health responses.[10] The GHSI rated New Zealand lower than many other high income countries (35th place; score 54.0). Yet many praise the prime minister, Jacinda Ardern's strong political leadership during the covid-19 crisis, especially her empathic and clear communication to the public and evidence based response. By contrast, other leaders, including Jair Bolsonaro in Brazil and Donald Trump in the US and, failed to accept scientific public health advice, promoted unproved therapies, and criticised the World Health Organization. In the UK, rated second highest on the GHSI, the covid-19 response led by the prime minister Boris Johnson was hampered by the process of leaving the European Union, which dominated the attention of politicians and efforts of civil servants.[11] The perils of populist leaders in pandemic responses have been previously highlighted.[12]

Assessing political leadership and philosophy may risk politicising the index and opening it to criticism from countries with low scores. However, existing frameworks for assessing the quality of a country's governance,[13] effectiveness,[14] and transparency can be drawn on.[15] Examples of poor governance during covid-19 include the growing concern about corruption in the procurement of essential equipment and the absence of transparency when contracting with private companies.[16] Given the vital importance of trust during a pandemic, political leaders who promote transparent government are more likely to mount a more effective response.

5. Importance of context overlooked

Consideration of context is key to the accurate assessment of health interventions.[17 18] Yet to allow for cross-country comparisons, indices often reduce complex systems to a standard set of measures that overlook important differences, such as dynamic political, economic, and social structures and systems[6]

The context can include the degree of centralisation of power. New Zealand and Vietnam have centralised governments, and both fared well in response to covid-19. Some federated states including India, the US, Belgium, Australia, and South Africa have pandemic responses that have varied in effectiveness and point to the value of national coordination. Future predictive work would benefit from a qualitative, context assessment of each country, informed by a range of expertise.

6. Limits of national wealth as predictive factor

The GHSI report noted a positive correlation between gross domestic product (GDP) (0.37) and GDP per capita (0.44) and the GHSI score.[1] But national wealth may not be the only or main determinant of health security. Lower income countries may allocate their scarce resources more appropriately and tailored to context.[5 6] In Rwanda, a strong health system, rapid lockdown, and effective contact testing and testing have kept cases low.[22] Similarly, despite Vietnam's low GDP it has had a highly effective pandemic response.

7. No examination of inequalities within countries

The covid-19 pandemic has heightened pre-existing inequalities in many countries. Most nations reported minority populations being most vulnerable. In the US, black, Hispanic, and Native American people were more susceptible to infection, severe illness, hospitalisation, and death.[24-26] In Australia, recently arrived migrants faced greater risk,[27] while minority ethnic groups bore a high burden in the UK.[28] In South Africa, most infection hot spots arose in high density, overcrowded settlements with poor access to water and heavy reliance on cramped private taxi transport in the absence of any public transport.[29]

Everywhere, marginalised people and those living in precarious situations tend to fall through the cracks in the social safety nets, find it harder to isolate when required, and cannot avoid settings where the risks of infection are high. Marginalised people also face the risk of losing their jobs and housing, fail to qualify for social security, and face food insecurity. Future iterations of the GHSI should include measures of the scale and nature of inequalities within a country.

8. Importance of social security provisions

The covid-19 pandemic has highlighted the importance of social security provisions to protect people from losing their jobs and homes, yet the GHSI does not consider them in its assessment. Government support to people and businesses affected by covid-19 has been important. For example, in many high income countries, unemployment benefits and job and income support schemes have protected many from extreme poverty, whereas in most low and middle income countries such income protection does not exist. In India, the absence of government support forced tens of thousands of migrant workers to return to their home villages. Some died and many faced police harassment and hunger. In many countries, sick leave has been effective at enabling people to follow public health advice to self-isolate. Including measures of social protection would improve future indices.

9. Civil society capacity not assessed

The GHSI did not assess the capacity of civil society organisations to assist in pandemic responses. Social solidarity built on civil society engagement can offer protection even where trust in government is weak. For example, in South Africa, Cape Town's community action networks are working both to ameliorate the consequences of lockdown and reduce local transmission. Using social media, they built local relationships based on trust and challenged divisive individualism by creating a collective consciousness for responses to covid-19 related issues.[31] Societies can also create political space for civil society and social movement activists to protest human rights abuses, which often increase under the cover of exceptional or emergency pandemic measures.[32] Future exercises should include civil society perspectives and their potential to respond to pandemics.

10. Gap between capacity and its application not assessed

Although the GHSI assessed the theoretical capacity of a country to respond to a pandemic it did not examine the actual capacity and willingness to respond. For example, the US scored high on applied epidemiology training programmes (indicators 2.3.1) but political intervention prevented the Centers for Disease Control and Prevention from applying epidemiological science to responses to the pandemic. A complex system is only as strong as its weakest point. Preparedness assessments based on system critical components discussed here work best.

Conclusion

The GHSI report accurately predicted that the world was not well prepared for a pandemic. However, the complex country responses to covid-19 and biases within the GHSI limited the accuracy of its predictions for specific countries. To strengthen the predictive capabilities of global indices, a diverse team of experts should be used to assess the complex set of factors that shape a country's capacity to respond.

Other vital indicators needed in future global indices to assess a country's likely capacity for a robust response to a pandemic include the extent of inequities in a country, the strength of social protection and public health response capacity, the geographical context, and exposure to globalisation. Qualitative assessment of a country's capacities in terms of its political leadership's willingness to accept scientific advice and the strength of its civil society to protect human rights and foster trust is also important. Existing measures of corruption and trust should be used in future indices. The need for cross-border cooperation and joint planning of future assessments of global pandemic preparedness point to the need to examine the capacity of supra-national organisations. The crucial lesson from the covid-19 pandemic is that an effective response does not rely just on a strong public health system but also requires a society that is fair and offers all its citizens and residents social and economic security.

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Toby Freeman; Connie Musolino; Mimi Abramovitz; Wim De Ceukelaire; Joanne Flavel; Sharon Friel; Camila Giugliani; Philippa Howden-Chapman; Nguyen Thanh Huong; Leslie London; Martin McKee; Jennie Popay; Hani Serag; Eugenio Villar, full author details on bmj.com.

LETTERS Selected from rapid responses on bmj.com

An economic perspective on vaccinating the world

Covid-19 has exposed the inability of pharmaceutical regulation systems to ensure global vaccine coverage. We are currently seeking to resolve problems related to demand with solutions such as fair and equitable priority setting, none of which helps achieve universal coverage. The solution is to combine priority setting with the other side of the economic equation—supply (News Analysis, 15 May).

Vaccines for all, as proposed by prominent campaigns, is restricted by patent protectionism in combination with the ability (and willingness) of rich nations to ensure gross over provision for their own populations—vaccine nationalism. Meagre donations to global initiatives such as Covax have resulted. (Note the lack of transparency in contracts struck with the pharmaceutical industry, which are likely to result in higher and inequitable pricing than might otherwise be the case.)

Two keys can unlock this.

The first key would require vaccine producers to waive their patents and place their intellectual property in the public domain, at least temporarily, enabling generic drug manufacture to vastly increase supply at greatly reduced prices. Many of the publicly funded scientists behind vaccine development support this.

The second key is an operator to ensure that supply goes to where it is most needed (not demanded). Gavi, the Vaccine Alliance, of which Covax is a part, presents a ready made not-for-profit model for necessary interactions between stakeholders and could ensure manufacturing standards, creation of skilled generic producing jobs in lower income countries, and suitable recompense for patent holding companies.

Such companies would also benefit, along with wider society, from a quicker move to the post-covid world we all crave. Any estimate of the worldwide health and economic benefits of such a proposal far outweighs the costs. If we focus on supply side solutions, we can get vaccines done—globally, not nationally.

Cam Donaldson, Yunus chair and distinguished professor of health economics; Olga Biosca, reader in economics, Glasgow
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GENERAL PRACTICE ON BRINK

Three key solutions the government must implement

Salisbury describes the importance of general practice and its current state of crisis (Helen Salisbury, 15 May). The UK urgently needs efficient and proactive general practice services. We recommend three key solutions that the government should implement immediately:

- The health of doctors must be prioritised. We should create workplaces that support doctors by promoting their health. This would also support staff retention, quality of care, and patient health and satisfaction
- The government should put greater emphasis on promoting population health and reducing inequalities. The Office for Health Promotion should develop a long term multisector health promotion strategy
- The longstanding underinvestment in general practice must be tackled. With an immediate injection of funds, doctors would be more likely to meet the current and future challenges including an ageing population, multimorbidity, and the backlog of care caused by the covid-19 pandemic. It would also send a clear signal that general practice is valued.

Michael Craig Watson, trustee; Patricia Owen, president, Institute of Health Promotion and Education
Cite this as: *BMJ* 2021;373:n1482

SUSTAINABILITY

New ways of working will sustain our profession

Salisbury asks how we can create a truly sustainable practice for healthcare staff (Helen Salisbury, 1 May).

The pandemic has given us a chance to step back, recuperate, and reflect on our working lives. We should embrace positive changes such as digital technology, remote consultations, and patient self-care and management.

GPs must take the opportunity to work closely with colleagues in the Additional Roles Reimbursement Scheme. These are social prescribers dealing with patients' non-medical needs; clinical pharmacists dealing with repeat prescriptions and medication reviews; paramedics in charge of home visits; advanced nurse practitioners looking after our patients with long term chronic diseases, minor illnesses, and so on. Working in a multidisciplinary team with a range of skills, sharing workloads and ensuring the best appropriate care and support is given to our patients, is rewarding.

This unquestionably would help towards sustainability, flexibility, morale, and maintenance of work-life balance in general practice.

Vasumathy Sivarajasingam, general practice partner, Greenford
Cite this as: *BMJ* 2021;373:n1393

CLINICAL NEGLIGENCE

Actuarial tools can help improve safety

The path outlined in the Getting It Right the First Time programme (Seven Days in Medicine, 15 May) should be followed not only to reduce health expenditure on compensation, but also because incident reporting and claims are clearly not disconnected but rather two faces of the same coin.

It might be useful to extend the application of predictive tools used in the insurance world to the evaluation of incident reporting. This refers to the actuarial tools used to establish claims reserves and is based on the "incurred but not reported" concept that could be transferred to incident reporting, achieving a credible projection of the expected reports based on the historical series of reports registered by accident type in a health facility.

Building on predictive trends in this way will make it possible to establish a comparison in the final balance and to evaluate possible deviation to guide strategies of possible improvements.

Federica Foti, forensic pathologist, Rome
Fabio De-Giorgio, forensic pathologist and associate professor, Rome
Giuseppe Vetrugno, risk manager and forensic pathologist, associate professor, Rome
Cite this as: *BMJ* 2021;373:n1480

REHABILITATION AFTER CRITICAL ILLNESS

Don't overlook technological and social factors

White and colleagues call for more expert, multidisciplinary, integrated, and consistent follow-up for patients admitted to intensive care (Editorial, 8 May). Technology and community are also important.

The pandemic has fundamentally changed aftercare. Remote consultations might reduce the frequency of expensive and inconvenient journeys to appointments, but they might also obscure subtle clues of unmet psychological and physical needs and depersonalise the professional-patient relationship. They exacerbate health inequalities by excluding patients with unreliable internet access and those with English as a second language.

A multidisciplinary team can tackle complex and myriad physical, cognitive, and psychological consequences of prolonged intensive care admission, but this is only part of the puzzle. Rediscovering a sense of purpose and reconnecting with friends, family, and the community are equally important. Even with optimal aftercare, the postponement of support group meetings and social isolation resulting from lockdown might have left patients feeling alone and rudderless.

Charles Coughlan, honorary clinical research fellow; Weronika Ranisz, physiotherapy masters student; Clare Leon-Villapalos, lead nurse for education in critical care; Victoria Newey, clinical lead physiotherapist for critical care, respiratory medicine, and surgery; Claire Boynton, consultant in cardiothoracic anaesthesia and critical care; Eve Corner, lecturer in physiotherapy; Stephen Brett, professor of critical care, London; Gordon Sturmey, patient, Thatcham; Matt Wiltshire, patient, Wokingham

Successful return to work

White and colleagues comment on the ability to return to work after critical illness. Delayed return or job loss can be catastrophic for patients and their families. Intensive care teams can help by advising those who were working before their illness to remain in contact with their employer.

Other ways of supporting people back to work after severe illness can include a phased return to work (which might start with a few hours per week), working from home, modifying tasks or responsibilities at work, allowing time off work for health related activities such as appointments and rehabilitation, and using the Access to Work scheme or other advice from the Department for Work and Pensions.

Critical care teams can, by these simple means, reduce unnecessary worry about future job prospects. Facilitating a successful return to work helps not only patients and their families but also their employers and the government.

Andrew O Frank, trustee and past chair, Vocational Rehabilitation Association

INVESTIGATING HYPOTHYROIDISM

Different thyroid assays give different results

Siskind and colleagues do not mention the effects of thyroid assays and their reference ranges on the diagnosis and management of hypothyroidism (Rational Testing, 8 May). We found that assays from Abbott Laboratories and Roche Diagnostics gave strikingly different results.

Of 53 patients with subclinical hypothyroidism (SCH) on Roche assays, 13 (24.5%) also had SCH on Abbott assays; 28 of 40 (70%) patients with Abbott defined SCH had SCH on Roche assays. Only 44% of patients had concordant results.

For thyroid stimulating hormone, the Roche results were 40% higher than Abbott's, but the upper reference limit was 18% lower. For free thyroxine, Roche results were 16% higher, but the lower reference limit was 25% higher. So, the Roche assays are likely to give high thyroid stimulating hormone results and low free thyroxine results.

We don't know, however, whether Roche assays lead to incorrect diagnoses and treatment of SCH or whether Abbott assays lead to missed diagnoses and undertreatment of SCH.

Tejas Kalaria, registrar in chemical pathology and metabolic medicine; Jonathan Fenn, trainee clinical scientist; Harit N Buch, consultant in endocrinology and diabetes; Clare Ford, consultant clinical scientist; Rousseau Gama, consultant chemical pathologist, Wolverhampton; Anna Sanders, principal clinical scientist; Helen L Ashby, consultant chemical pathologist and metabolic physician; Pervaz Mohammed, consultant clinical scientist, Dudley

How to take levothyroxine

It might be worth counselling any patient with newly diagnosed hypothyroidism on how to take levothyroxine correctly. Our pharmacy colleagues will probably also advise on this. Levothyroxine is best taken on an empty stomach 30 minutes before food and should not be taken with caffeine. This is not commonly taught and may be a cause for poor response.

Simon Hodes, GP, Watford

IMPACT OF SELF-HARM

Compassionate and continuous self-harm services

An anonymous author shares a powerful story of feeling that their self-harm was dismissed and how this affected future help seeking (What Your Patient Is Thinking, 15 May). Self-harm is the strongest risk factor for suicide: it must be taken seriously.

The author described being free of self-harm when receiving regular care with one healthcare professional who used good communications skills. Recent research with young people found that continuity of care from a GP who actively listened, understood, and arranged follow-up was key.

The NHS Long Term Plan commits to the integration of primary and community care self-harm services. People with lived experience have a crucial role in the training of professionals to deliver these services and in their evaluation. At the core of these services must be a compassionate and empathetic model of self-harm care, in which patients' concerns and needs are respected and valued, along with continuity of care.

Faraz Mughal, general practitioner and NIHR doctoral fellow, Keele; Leah Quinlivan, chartered psychologist and research fellow, Manchester

David Smith

Consultant pathologist West Cumberland Hospital, Whitehaven, Cumbria (b 1933; q Manchester 1956; FRCPath), died from frailty of old age on 8 December 2020

David Smith was appointed consultant pathologist at the West Cumberland Hospital in 1967, where he remained until his retirement in 1998. He sat on hospital committees and had overall responsibility for coordinating the design of the new extension to the pathology laboratory a few years before he retired. He was also one of the doctors working in the breast screening service when it was first set up in West Cumbria. He had quite a large garden, which he looked after until his 70s. His greatest interest outside his family was fell walking, but the diagnosis of chronic inflammatory demyelinating peripheral neuropathy affecting his balance put an end to this. Predeceased by his wife, Olive, he leaves two children and two grandchildren.

Peter Smith

Cite this as: *BMJ* 2021;373:n887

Saad Shakir Al-Dujaily

Consultant urologist Basildon and Thurrock University Hospital (b 1950; q Baghdad 1973; FRCS, MSc), died from multiorgan failure due to covid-19 on 2 February 2021

My father, Saad Shakir Al-Dujaily, came to the UK from Saddam Hussein's Iraq, after being blacklisted by the regime. Having trained as a doctor in Baghdad's famous medical city in 1973 he practised in Iraq until 1981. In the UK he served the NHS for 40 years until he sadly contracted covid-19 in December 2020. Even while ill in hospital, he called his colleagues to try and organise forthcoming meetings and clinics. He always gave his all to his patients, as shown by his NHS Health Hero award in 2010. Saad was an extremely generous and giving man, constantly giving medical supplies to the needy whether in this country or back home. Saad Shakir Al-Dujaily leaves his wife and son.

Bilal Saad Al'Dujaily

Cite this as: *BMJ* 2021;373:n890

Christopher William Thomas

GP (b 1932; q Edinburgh 1957), died from cancer on 22 February 2021

Christopher William Thomas undertook house jobs at the Royal Gwent Hospital, Newport, Gwent, and midwifery at the County Hospital Gwent. He did national service for two years as regimental medical officer to the 2nd Royal Tank Regiment in Libya, North Africa. In 1960 Christopher became a GP in Bristol and worked there for 40 years until he retired. He was married to Mary for 63 years, and they had two daughters, Sally and Jane. Christopher was a Serving Brother in St John's Ambulance and an active member and lecturer locally. He was chairman of St Christopher's School for handicapped children and of the local Friends of Lanercost Road Day Centre. His strong Christian faith was of help to him during his last painful five years struggling with cancer. He leaves Mary, two daughters, and grandchildren.

Tim Morse

Cite this as: *BMJ* 2021;373:n885

John "Brian" Cocking

Consultant in general medicine and gastroenterology and medical director Queen Elizabeth the Queen Mother Hospital, Margate, Kent (b 1936; q Cambridge/ Middlesex Hospital Medical School, London, 1961; MA, FRCP), died from bronchopneumonia, chronic subdural haemorrhage, and acute subarachnoid haemorrhage on 23 June 2020

As a houseman, John "Brian" Cocking met his future wife, Rosemary Burnett, a nurse. In 1973 he joined the Thanet District Hospital in Margate (which became the QEQM Hospital) and eventually became a senior consultant physician in gastroenterology and medical director. He developed a comprehensive gastroenterology endoscopy service. From 1992, Brian was involved in undergraduate teaching as an honorary clinical teacher with University College London and Middlesex School of Medicine as well as the Charing Cross and Westminster medical schools. He leaves Rosemary, three children, and four grandchildren.

Alexander Marshall

Cite this as: *BMJ* 2021;373:n891

Kandiah Ratnakumar

Consultant orthopaedic surgeon London (b 1951; q University of Peradeniya, Sri Lanka, 1975; FRCS), died from covid-19 on 26 January 2021

Kandiah Ratnakumar ("Ratna") was born and grew up in Jaffna, Sri Lanka. He finished his orthopaedic specialist training in 1994, following stints in London, Rotherham, and Newcastle in the UK, and Newfoundland and Nova Scotia in Canada. He was appointed as a consultant trauma and orthopaedic surgeon at Oldchurch Hospital in Essex in 2001 (later merged into Queen's Hospital), continuing as a surgeon specialising in knee and hip replacement until his retirement in early 2020. Ratna had undertaken orthopaedic lists in private practice to clear backlogs caused by the covid-19 pandemic. His sad and unnecessary death from covid-19, just weeks before he would have been vaccinated, leaves an enormous void in the lives of all those who loved him, most of all his wife, Saro (Sarojinidevi).

Kumanan Rasanathan

Cite this as: *BMJ* 2021;373:n889

Christopher Trounce

GP for homeless people Truro, Cornwall (b 1955; q Guy's Hospital, London, 1978; MRCP (UK), MRCGP), died from cerebral metastases after carcinoma of the oesophagus on 26 November 2020

I decided to become a general practitioner after watching the film *Dr Zhivago* at an impressionable age. After training I worked for three years in central Plymouth, and then moved to a rural practice in south Devon (Chillington), where I was blessed with generous colleagues and forgiving patients. Finding I loved the countryside more than country general practice I moved to Cornwall in 2003, to help establish a specialist primary care service for homeless people (Cornwall Health for the Homeless). I retired in 2015, and in retirement enjoyed art, poetry, and gardening. I was diagnosed with oesophageal cancer two years later, and died from cerebral metastases. I leave my wife, Anne Prendiville (a paediatrician), and Poppy the springer spaniel.

Christopher Trounce

Cite this as: *BMJ* 2021;373:n884

Paul Schatzberger

GP, musician, and photographer

b 1950; q University College London Hospital, 1973; MRCGP, MFPHM, died from acute renal failure due to colitis induced by immunotherapy for metastatic renal cell carcinoma on 29 December 2020

Paul Schatzberger couldn't decide between medicine and music. But ultimately creativity ran through everything he did in life. He grew up in Manchester, the son of Jewish Viennese child refugees Rosl and Wolfgang.

His love of music grew with violin lessons from the age of six and was further encouraged by his father, who taught him to play Viennese music on a piano accordion. Paul's grandmother had been a concert pianist in Vienna before her life ended in Auschwitz.

In 1967, as he finished school, Paul was chosen by the Bridge of Britain Programme—a non-denominational, educational charity aimed at fostering "understanding between Britain and Israel, Jew and non-Jew, through practical educational and mainly social service exchange schemes."

He was selected because he was considered to be a significant young person who would be likely to make a difference in the world. He took his accordion and lived in a Kibbutz for six months.

Music

At medical school his violin playing led him to become the leader of the University of London Orchestra, where he met his future wife, Angie, who led the cello section. After qualifying as a GP, Paul took time out to develop his musical repertoire, joining a band with electric violin. Blitzfish notably supported Iron Maiden in 1976 at Walthamstow Assembly Hall.

Paul's medical bible was *A Fortunate Man* by John Berger, and he and Angie

Paul Schatzberger was a true "birth to grave" doctor with a strong drive to make things better

moved to Sheffield in 1983, attracted by the opportunity to join a group of radical and innovative GP practices intent on transforming primary care. He joined a small but growing network of practices that sought to loosen the power of doctors. Well before the advent of fundholding in primary care, they promoted the use of nurse practitioners, interpreters, and counsellors, and opened a practice based health food shop. He was also active in the Sheffield branch of the Medical Practitioners Union during the 1980s and 1990s before retraining in public health.

Paul eventually became lead GP and clinical director for North Sheffield Primary Care Trust in 2003, while continuing to play violin around the UK and mainland Europe.

He chose a work-life balance that enabled him to share childcare with Angie, who was working as a psychotherapist. All three of their children—Tom, Katy, and Rebecca—now work in the NHS. The premature death of his niece Jessica in 1994 took Paul back into direct clinical work as a GP because he felt that the most meaningful contribution he could make to health was at an individual level.

In the middle of Katy's 8th birthday party, Paul heard from another parent that a disaster was unfolding just down the road at Hillsborough football stadium. He responded to the call put out for help on local radio and felt overwhelmed by what he saw.

Photography

Alongside music Paul had also maintained an interest in photography, creating dark rooms whenever he moved home. After returning to general practice and subsequently retiring early in 2007, Paul pursued a second career in fine art photography, having been regularly exhibiting his art professionally and winning awards for it since 1994. After decades of collecting cameras, he successfully transitioned to the digital age and produced some of his most captivating images on his iPhone.

Taking his creative drive one step further, he put himself up as a violin playing "extra" in a number of UK produced films including *Tolkien* (2019) and *Victoria* (TV 2016). He also enjoyed a small role in *Mr Turner* (2014).

Paul was a true "birth to grave" doctor with a strong drive to make things better. In Sheffield he was instrumental in improving drug and alcohol services and in reaching the most deprived communities. He actively supported home births, and he was also drawn to the subject of death; his photography uniquely captured this.
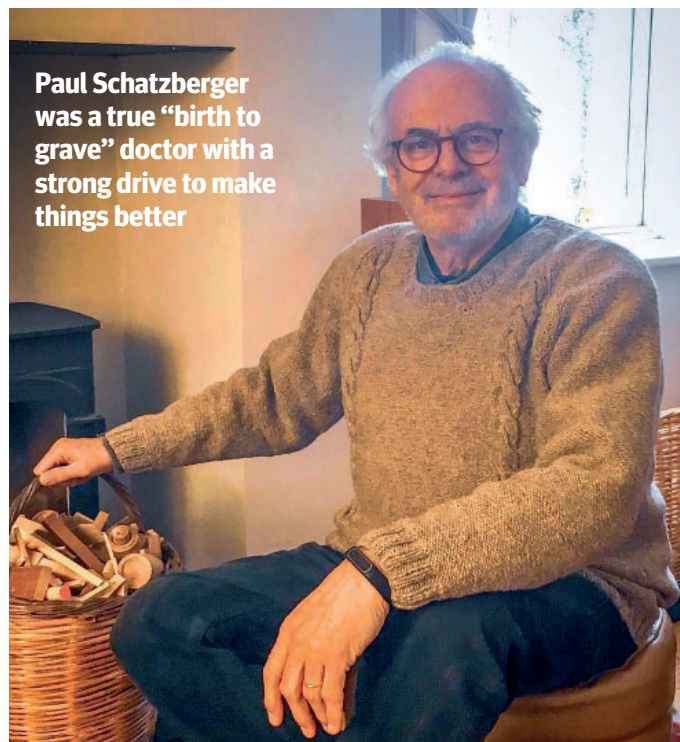
Despite failing health, Paul was still participating enthusiastically in international musical projects (remotely) in late 2020. He kept his own illness quiet, partly because he was looking forward to playing again with the Brigantes Orchestra, a professional Sheffield based orchestra, in 2022. He played two violins, one made for him by his father, who outlived him by a month.

He leaves Rosl, Angie, Tom, Katy, and Rebecca; his sister, Lesley; and seven grandchildren, along with many, many friends.

Abi Berger

Tom Schatzberger

Cite this as: *BMJ* 2021;372:n737