comment

WOUNDED HEALER Clare Gerada

Protection on the covid-19 frontline

I brought more than a fridge magnet back from my recent trip to New York. Unbeknown to me, I also brought covid-19. I confused the initial symptoms of fatigue with jet lag. I thought that the dry cough was secondary to the effects of cabin air. However, a high temperature wasn't a symptom of jet lag, and soon after arriving home I realised I'd developed the illness that's been on everyone's mind for weeks.

The NHS was still routinely testing, although in the community this was only for people who had returned from a list of high risk countries, and the US wasn't included. However, given my role as a GP and New York having just declared a state of emergency, I was tested.

The symptoms came on quickly. I went from being completely well to being poleaxed in about two hours. The symptoms are as they say on the tin—high temperature and dry cough. Add to that a headache, chest pain, muscle aches, loss of appetite, and rigors, and you get the picture. Three days in bed, rising only to use the bathroom. I still have fatigue and muscle pains, but they're receding, and I hope that soon the only evidence that I've had this will be the antibodies, conferring (hopefully) immunity.

In time, other UK doctors will get this infection. As in any health crisis, their role is pivotal. We'll be on the front line of this pandemic. Already, friends who were planning to hang up their stethoscopes are staying on. Others are planning to come back from recent retirement.

We know from colleagues in Italy that doctors are facing difficult decisions about which patients should receive precious resources and which should be left to fend for themselves. Doctors will be making personal sacrifices to help—and they will, as history shows us, make the needs of patients their first concern.

But doctors also have an ethical duty to protect themselves and their colleagues. Currently, this means wearing protective equipment when in contact with patients thought to be infected, following personal hygiene guidance, and taking rest between shifts. I appreciated my texts and emails from friends and colleagues. I also received a call from the hospital where I'd been tested, to see how I was. That simple act of reaching out meant that I didn't feel so frightened.

So much will already be different. Our practice is trying to move over 80% of patient contacts to remote consultations. Revalidation, appraisal, inspections by the Care Quality Commission, continuing professional development, and many more burdens are already being removed. I'm through my covid-19 experience. I'm now keen to return to work and help my colleagues, in what's going to be a long, tough, and anxious few months.

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> Doctors also have an ethical duty to protect themselves and their colleagues

PERSONAL VIEW Shreena Unadkat and Michael Farquhar

Self-care for doctors during the covid-19 crisis

During a period of increased stress and uncertainty it is more important than ever for NHS staff to look after themselves

In February 2019, Health Education England published the Pearson report looking at the mental wellbeing of NHS staff. It asked about who cares for the people who care for the nation's health and stated, "We must improve the way in which we look after ourselves and our colleagues, so they are better placed to meet the needs of patients."

That reflects a growing consensus—from the GMC, the royal colleges, the BMA, and others—that protecting the wellbeing of NHS staff is essential. The service, already under chronic strain, is about to be put under almost unimaginable additional pressure, as we respond to a global public health challenge of a magnitude not seen for generations.

The more pressured things become, the more important it is to pay attention to the wellbeing of staff. The covid-19 pandemic will almost certainly be a marathon, not a sprint. To continue to deliver the best possible care for its duration, we must support our workforce from the beginning. Looking after ourselves and our colleagues has never been more important; we must give ourselves permission to change "the patient is always first" narrative to "the patient always—but not always first."

When pressure and demand are high, when staff feel they need to stretch to extreme levels to cope, it can seem impossible to stop and take a break. But they are not superhuman.

Pushed to their limits NHS staff, like everyone, become fatigued and performance drops. If breaks are not taken consistently, we run the risk of staff being broken. The NHS workforce is incredibly resilient; it is, however, in danger of believing that resilience means never showing you are tired or stressed.

Recharge

We must emphasise that regular rest and breaks are for recharging and must be clearly modelled and supported by senior leaders. Most of us start to feel anxious as soon as our phone's battery charge shows red, and we look for sockets to recharge—but we don't always apply the same principles to ourselves.

If we exhaust ourselves sprinting in the first mile of the marathon, the next miles will be harder. Stress is a normal human experience that indicates when something needs to change. A better strategy for long term psychological wellbeing is being able to stop.

Paying attention to signs of physiological hyperarousal is a good starting point, as our

Having other people match our experience is grounding and helps us to make sense of what is happening

bodies often indicate that we need to stop long before we admit that we are struggling. Online, brief "body scan" exercises are freely available and can help staff to pause and build awareness of mind and body.

When stressed, sleep becomes more difficult. The temptation is to see sleep as a luxury, not an essential. Supporting staff to get the best sleep they can is critical, because sleep is essential for physical and mental health. Crucially, when we are sleep deprived, our immune systems function less well, increasing our chances of becoming symptomatic on viral exposure.

We can also look after each other by compassionately witnessing and acknowledging the daily experience of working through a global health crisis. This is an evolving situation, and many people have a sense of "unreality." Having other people match our experience is grounding and helps us to make sense of what is happening, which is important for longer term emotional processing.

ETHICS MAN Daniel Sokol

Ethics in a pandemic

Covid-19 has brought to the fore a range of ethical matters affecting individuals, organisations, and governments.

As individuals, we have moral obligations towards ourselves and others. Clearly, the man who, on his way to the cinema, walks into a crowded train, visibly unwell, and coughs and sputters everywhere is acting in a way that is ethically reprehensible. He is causing distress and putting himself and others at

risk of harm without good reason. Similarly, it would be irresponsible to allow young children, who may be asymptomatic carriers of the virus, to spend time with their elderly and frail grandparents, or for us to burden the health system with non-urgent matters.

These examples illustrate the different standards of law and ethics. It may not be illegal to ignore the advice of washing our hands and covering our mouths when we cough but it is certainly unethical. We cannot claim to have discharged our personal duties simply by saying we have acted lawfully.

Ethics in these pandemic times may require us to endure sacrifices of our personal freedoms or comfort, such as social distancing or avoiding a visit to the doctor. As someone who has spent the past three days

What matters most is the fairness and integrity of the decision making process

scouring the city for toilet paper, I invite my fellow citizens to exercise restraint on that front too. It is a limited resource.

The NHS is in a particularly challenging situation. It has duties of care towards patients and staff. As resources such as beds, equipment, and staff will be limited it may have to decide who gets treatment and who does not. If intensive care beds or ventilators are in short supply, how will it be decided who gets the bed or ventilator? What criteria will they use? What will happen to the unlucky patients? It must offer training and protection to staff, including suitable protective equipment, with psychological support.

Being kind to ourselves, and to those around us, is essential.

Many trusts are mobilising their psychological therapists to help frontline staff manage through this time. Staff should check with local psychology leads and occupational health to see what is available.

When the pandemic is over, and we return to some sense of "normal," we will need an even more vigorous discussion about what safe staffing, safe resources, and a safe model of care really mean in the modern NHS.

Our ability to cope with extraordinary demands, like a viral pandemic, depends on our staff having resources and reserves to draw on. We have been drawing on those reserves for a long time now.

As Michael West said, on publication of the GMC's *Caring for Doctors, Caring for Patients* report last year, "We can't simply go on the way we are, loading more responsibility onto doctors already struggling to cope. Where workloads are excessive, patient care suffers."

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France has put in place "ethical support units" in hospitals to help clinicians determine which patients to prioritise if resources are lacking. No doubt UK hospitals are making similar plans and it is hoped they will not be making decisions in isolation or without the benefit of lessons learnt during previous pandemic preparations.

In resolving the ethical conundrums of covid-19, what matters most is the fairness and integrity of the decision making process. If that is done right, with no relevant factors ignored, the final decision can hardly be attacked as ethically indefensible.

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Political point scoring must wait

Now is surely not the time for premature post mortems on our response to covid-19, for party political point scoring, or for the reheating of historical resentments. In the war on covid-19 responses in the NHS and wider public policy are changing at a pace more like time lapse photography than our usual decision and communications cycle.

The virus will hospitalise or kill many people. The repurposing of health services to deal with it will marginalise many patients with other important, life limiting needs. For months, it will transform the jobs of people in frontline healthcare and other key public services. I'm a frontline NHS doctor working in acute care on the wards and on the acute medical intake. I and many colleagues have cared for patients with covid-19. We've watched some of them become critically ill and die. We've been frustrated by supply line problems and by conflicting advice on personal protective equipment and the risks to our own health or our families. We've shared similar concerns about access to testing and advice on self-isolation or returning to work.

We've wondered why the response from the government and the NHS leadership organisations seemed so at odds with the World Health Organization's guidance—or with that in South East Asian nations that are already flattening the curve. Maybe our national response should have been cranked up a few weeks earlier and been more assertive.

Perhaps that response was too influenced by a flawed predictive model or by behavioural insights based on less virulent or less fatal pandemics. We've sought reassurance, information, and action from authorities that might make us feel safer and more confident, and we've wondered to what extent advice from the chief medical and scientific officers have been compromised by bigger politics. Many of us have pointed out that years of poor policy have left the NHS and social care with too few staff, beds, and resources—flaws now cruelly exposed by the crisis.

For all these concerns, the pandemic is probably the nearest thing we've seen in peacetime to the radical societal changes and restrictions, repurposing of workers, and risks to people in key public services since the end of the second world war. Then we had a cross party government of national interest, and few Western nations were immune to the challenges and radical changes the war footing posed.

There will certainly be a time when we do need to reflect, analyse, and learn from our decision making and leadership, to assess the legacy of decisions made well before 2020. There may be some room for blame. In the meantime, we have clinicians, health service managers, government officials, expert advisers, academic teams, and yes, politicians, dealing with unprecedented challenges and all working flat out to find solutions.

We should keep asking tricky questions and demanding solutions. But can we leave the point scoring, resentments, media outbursts and reheated arguments until we're out of the tunnel? There will be plenty of time then.

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We should keep asking tricky questions and demanding solutions

Coronavirus diaries

I am writing in the lull before the storm, which will have surely arrived by the time you read this. We have been getting to grips with a new version of general practice this week, doing nearly all our work remotely. We are on the phone constantly, some doctors are using video, and one of my partners is self-isolating with a feverish family but doing telephone triage from home. We are seeing very few patients face to face, to protect both them and us. Our waiting room looks like the late stages of an abandoned game of musical chairs—only a few seats left, widely spaced and unoccupied.

Demand for some healthcare has reduced, as many patients reassess the importance of that sore shoulder or longstanding verruca. We are probably also missing opportunities to pick up cancers early in their course, as people are too scared to come to the doctor. Any slack has been taken up by people anxious about covid-19 who need our reassurance as much as is possible. Our patients are looking to us for more information, for an inside track, and it is hard to keep repeating that we don't know and that our advice can only be the same as what is publicly available.

The odd patient appears blithely unaware of the change and is still consulting about a problem with flat feet that has been ongoing for four years and needs a gentle explanation of why now might not be the best time to deal with it. We haven't received any advice about routine referrals—all elective outpatient activity has stopped at our local hospital, so it makes no sense to keep sending them. But if we are not all doing the same, we risk our patients being at the back of the very long queue when normal service is resumed.

We are short staffed, with clinical, reception, and admin staff all missing, either self-isolating because of cough, personal vulnerabilities, or illness in the family. This is certain to get worse.

The lull will be followed by a storm. There are efforts to set up a system in our city with green and red surgeries, trying to keep some areas free of the virus and concentrate the suspected cases in a few places. One of the big hurdles will be recruiting staff to work in the danger zones. Many GPs are not reassured that the personal protective equipment that has been provided is enough to keep us safe: we have fluid resistant surgical masks, aprons, and gloves, but no visors, long sleeved gowns, or air filtering masks. After the extremely poor scientific advice at the start of this pandemic, trust is in short supply—much like the appropriate kit.

We urgently need testing to make accurate diagnoses but also serology (antibody testing) to find out which staff might have already had the virus and are relatively safer to work with patients.

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> After the early extremely poor scientific advice, trust is in short supply—much like the appropriate kit

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BMJ OPINION

Covid-19: are we rationing who we care about?

Viruses are great levellers—so it is with covid-19, which has no regard for social status or affluence. We are all at risk, although some groups, such as older people and those with comorbidities, are thought to be more vulnerable to the impact of the virus.

There are other groups we risk forgetting about, however, such as people sleeping rough, injecting drug users, and those dependent on drugs, who are also likely to be more vulnerable to the effects of this virus. While these groups should not be lumped together, there is some overlap between them as people who use drugs are seven times more likely to be homeless.

Perhaps it's unsurprising that these groups have so far been ignored in government communications. Despite rising numbers of homeless and drug related deaths, these problems haven't been given the attention or investment they deserve. These groups have little voice and few advocates, so can be ignored without a public backlash or compromising political popularity.

Ignoring these people, however, is shortsighted; if the government's aim is to mitigate the impact of the virus, then all at risk groups should be considered and appropriate planning and action taken to protect them. People sleeping rough are unlikely to have regular access to hand washing facilities, soap, or hand sanitisers, and they live in close proximity to each other—in hostels or in tents, for example. It will be that much harder for people who are homeless to carry out the social distancing measures that public health experts are advising, or to self-isolate if they have symptoms.

Another group not well served by our healthcare system is those injecting drugs, such as heroin and cocaine. These drugs affect respiratory function, compounding the ability of the people who use them to recover from infection. Added to this is the higher rates of tobacco use among people using drugs, which also compromises respiratory functioning.

So, as we are all encouraged by the government to pull together and consider the collective good, we appear to risk leaving some of our society behind. It's in all our interests to ensure that people who are sleeping rough or using drugs are protected and cared for during this coronavirus outbreak. The lack of attention and willingness by the government to mitigate the risks these groups face throws into sharp relief who we collectively think is deserving of care and who isn't.

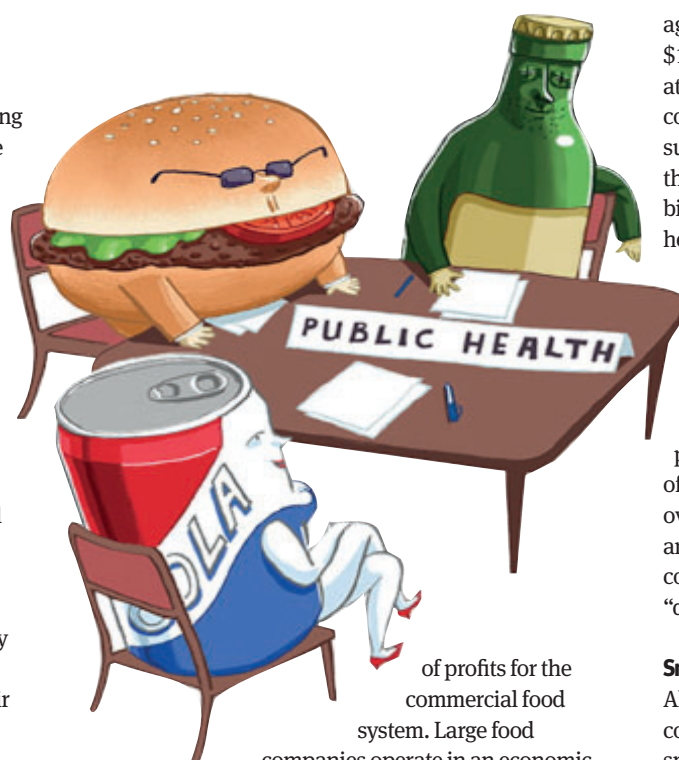Ian Hamilton is an academic at the University of York

Role of commercial food system in promoting health through better diet

Martin White and colleagues consider that the industry has the potential to show leadership and support for dietary public health, but systemic change is needed first

The commercial food system is of increasing concern to those responsible for improving population health.[1] The transition in global nutrition is rapidly changing agricultural practices and increasing the consumption of nutritionally poor processed foods, which are associated with increases in non-communicable diseases.[2] The growth of childhood obesity, in particular, continues largely unchecked, risking enormous burdens of future disease, health system costs,[3] and intergenerational inequalities.[4]

The mechanisms that lead to associations between processed foods and poor health remain largely unknown.[5] Processed foods have some advantages—for example, their longer shelf life and convenience— and they may not inherently need to be unhealthy. Nevertheless, how to achieve healthier processed foods remains unclear.[5]

Food processing, and associated marketing, adds value to raw ingredients[6] and is a key driver of profits for the commercial food system. Large food companies operate in an economic environment that demands continual growth of profits. This drive for profits leads to a range of emergent behaviours, such as aggressive marketing, the avoidance of regulation that could impede profits (eg, through lobbying), and the generation of huge external health, social, and environmental costs associated with high volume sales of processed foods.

We examine how social, public health, and sustainability goals can achieve parity with profit in the commercial food system and what leadership is needed to support this challenge globally.

Commercial food systems, diet, and health

The commercial food system delivers largely affordable food to whole populations and has become vital to national economies, providing considerable employment and contribution to export trade.[12] Global agricultural trade is valued at around $1tn (£0.78tn) and food retail sales at around $4tn annually.[13] The commercial food system produces sufficient food to adequately nourish the global population of around 7.5 billion but has two key defects. It is heavily skewed towards processed foods,[14-16] and distribution of food products is uneven, resulting in substantial inequalities in physical and economic access to healthy and nutritious foods.[12] Thus in many parts of the world people remain undernourished, yet, often in the same countries, people overeat affordable, energy dense foods and have associated chronic non-communicable diseases, leading to a "double burden" of malnutrition.[17]

Small retailers and multinationals

Although multinational companies command large market shares for specific foods or in particular sectors (eg, grocery retailing), the much larger numbers of smaller enterprises are also critically important in food provision, driving industry innovation and growth. For example, although the largest fast food chain in the UK commands a significant market share, it has just 1200 outlets compared with, for example, 10 500 independent fish and chip shops[19] and around 64 000 independent takeaways.[20]

Multinational food companies have been increasingly criticised for their focus on maximising short term profits from less healthy food products, their negative effects on health and the environment, and their manipulation of markets and unduly influencing consumers. All these factors together shape policy and public opinion in relation to non-communicable disease prevention.[21]

Within the commercial food system a common pattern of "corporate

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KEY MESSAGES

- Populations across the globe are highly dependent on commercial food systems for daily nourishment
- Commercial food systems rely heavily on high volume sales of foods high in unhealthy ingredients to generate profits and value for shareholders
- The commercial food system does not adequately take account of the high costs of its activities for societies, health, or the environment
- Profit could be made from a healthier and more sustainable food system, in ways that are consistent with prevention of non-communicable diseases, but whole system change will be needed
- Governments need to catalyse rapid change through fiscal and regulatory policies
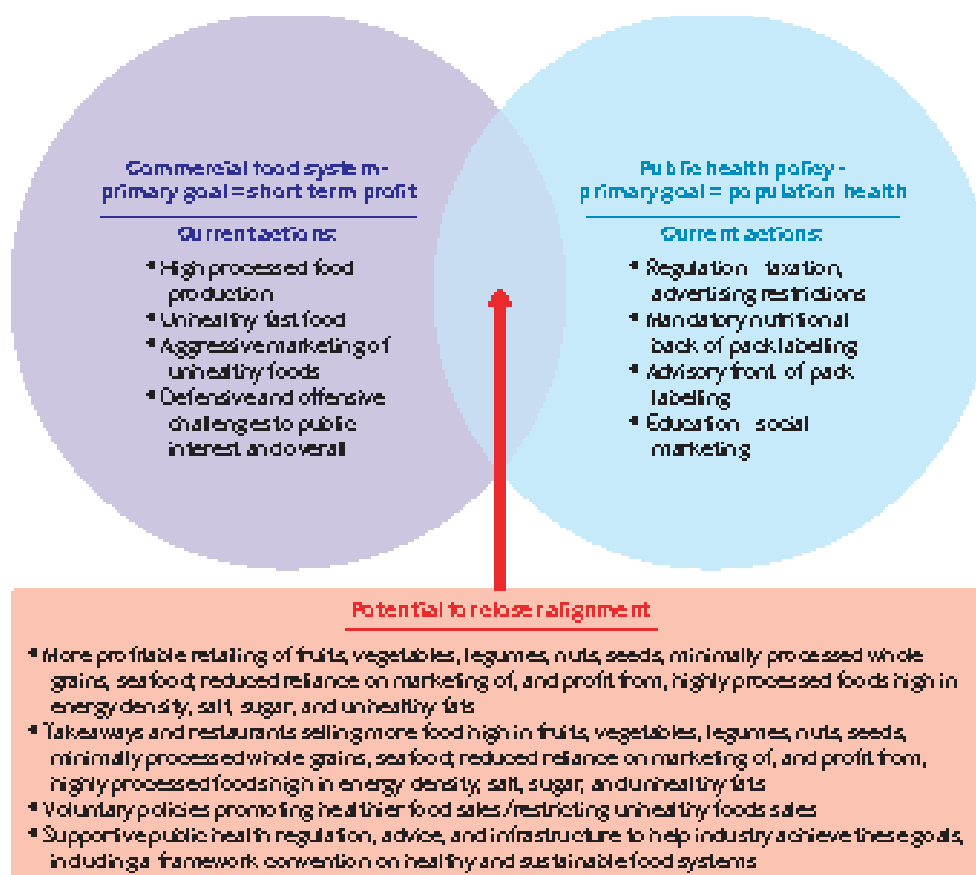
Goals, actions, and alignment of the commercial food system and public health

political activities" aimed at influencing policy and public opinion has emerged. These activities are also seen in other "harmful commodity industries"—for example, tobacco, alcohol, and gambling.[22] High profile examples of the influence of the food industry include efforts to change food labelling regulations in Europe[24] and to repeal health related food taxes (eg, the soda tax in Cook County, Chicago, and the Danish fat tax).[25]

Complex and adaptive

Commercial food systems encompass huge, complex, and interdependent networks of entities involved in agriculture and fisheries, food processing and production, storage and distribution, wholesaling and retailing, and preparation and marketing of raw, processed, and ready to eat foods. They are underpinned by global and national logistics, finance, trade agreements, and regulatory frameworks.[26]

To understand the commercial food system, it is helpful to view it as a set of inter-related complex adaptive

A small number of companies and retailers hold substantial economic power, which translates into substantial political influence

systems. Such systems tend to be governed by simple "rules" that lead to emergent properties. For example, supermarkets generally abide by an implicit, self-imposed simple rule—namely, that shelves must be plentifully stocked because consumers make a high proportion of purchasing decisions in front of shelves. This rule retains customers and drives sales but also creates logistic challenges that can result in overstocking and the emergent property of waste, especially of fresh produce.[28]

An example of the food system adapting is the emerging commercial response to the UK's soft drinks industry levy, which was introduced in 2018. This levy applies a graded tax structure to soft drinks, with three tiers according to sugar levels: higher tier (£0.24/L for drinks with >8 g of sugar/100 mL), lower (£0.18p/L for drinks with 5-8 g/100 mL), and no levy (for drinks with <5 g/100 mL). Manufacturers of higher sugar drinks can choose not to change their drinks and absorb the cost or pass it on to customers by increasing prices;

reduce sugar content to avoid the levy; or make other changes, such as diversifying their product ranges and the mix of product volumes and prices. All these responses have been seen since the announcement of the levy, yet the pattern of reactions was not predictable.[29]

Achieving growth

The commercial food system has achieved continual economic growth through a range of actions: increased agricultural productivity reducing the cost of inputs; increased processing that simultaneously reduces the costs of production and distribution, lowers prices, and increases palatability and convenience of foods to consumers;[31] intensive and targeted marketing of foods with the greatest added value from processing;[32] and increased economies of scale, consolidation, and extension of markets across nations. Economies of scale have been achieved through acquisitions, mergers, vertical and horizontal integration across the supply chain, proliferation of multinational companies, and using low wage economies.[11]

Highly processed foods are palatable and satisfy human taste for salty and sweet foods[9] but are widely criticised for not contributing to a healthy diet.[34] Aggressive marketing of such foods, often accompanied by health and nutrition claims (for example, "high in vitamins"), drives and distorts consumer demand.[35] Processed foods thus present a dilemma for public health, food policy, and consumer choice.

Recent growth in the sales of processed food, especially soft drinks, in low and middle income countries has been extraordinarily rapid.[36] In many countries, a small number of food companies and retailers hold substantial economic power, owing to their size and the collective efforts of their trade associations.[37] This power translates into substantial political influence nationally and internationally.[1] In such circumstances, profits usually come first, resulting in food governance and public health policy that does not adequately balance public and commercial interests.[22] Critically, the commercial food system does not

Potential for healthier eating out

Food prepared out of the home tends to be less healthy than food prepared at home, and its consumption has been associated with higher energy, saturated fat, and salt intakes and excess body mass.[54 55] In the UK, more than a quarter of adults and one fifth of children eat out more than once a week, and one fifth of both adults and children eat takeaway meals at home once or more a week.[56]

Research has focused mainly on the calorie content of food eaten outside the home, particularly calorie labelling.

A potentially more powerful action with greater effects on the population is to stimulate reformulation.[62] Structural interventions such as the promotion of smaller portion sizes using packaging or tableware,[63] adaptations to food dispensers (such as salt shakers that deliver less salt) in takeaways,[64] and levies on the price of less healthy foods in restaurants[65] have also been shown to promote healthier purchases, consumption, or diets.

adequately account for external costs, such as the environmental effects of intensive farming and food processing, the social costs of relying on low wage economies, and the effect on health of overconsumption of foods high in unhealthy ingredients and low in healthy ingredients (figure).[37] Food prices are therefore often artificially low.[38] Healthier, more sustainable, yet commercially viable food systems

When a market generates artificially low prices that do not account for environmental, social, and health externalities, government intervention is necessary. Furthermore, while food companies pursue profits through sales of unhealthy foods, they will maintain efforts to ensure that the regulatory environment favours the status quo.[39] In this case, governments will need to do more to limit the influence of companies on health policy—for example, through trade agreements, regulation of advertising, fiscal policies, mandating nutrition labelling and transparency on food ingredients, and, possibly, use of competition laws. Advocacy groups, health professionals, and consumers will need to do more to recognise and counter unacceptable commercial tactics and encourage greater transparency of policy making processes and decisions .

Commercial food companies can voluntarily shift their focus to expanding the market for healthier and more sustainable foods, while reducing the availability of less healthy foods. This shift would require a significant will to change as well

as technical and business model innovations (figure). The challenges are considerable, but companies that can overcome them should attain significant competitive advantage.

Small but growing movements are emerging, such as impact investing and alternative "social" business models.[40 41] These models also include community interest companies and "B corporation" certification, which requires companies to pursue public benefit in conjunction with profit.[42] The drive for such social purpose generally focuses on social or environmental causes, such as workers' rights and carbon reduction, and rarely on health.[2] Including health externalities in B corporation criteria would offer a new lever for change.

Increasing evidence shows that companies that place more emphasis on social goals can outperform competitors over the long term,[45] and that healthier foods are now driving sector innovation and growth. Indeed, there is some evidence that offering consumers healthier food has commercial potential (box). Whether this will also translate more widely into improved healthiness of food and associated sales remains to be seen.

Meaningful dietary change needs structural and system-wide action. Some food company executives have stated they prefer regulation to voluntary change as then all must follow the same rules.[68] Regulation with innovation and appropriate tax and incentive structures for unhealthy and healthy foods, respectively, supported by voluntary actions, could enable the commercial food system to move more rapidly towards supplying healthy foods.[69]

Policy, practice, and research implications
Governments will need to act as both catalyst and regulator of change.[73] Catalytic activities include information brokerage, coordination, and mobilisation of resources. These activities need to be supported by accountability systems to better promote company valuation beyond profit, which in turn requires change in accounting practices and

improved metrics for measuring social, health, and environmental impacts, which are currently being explored.[74]

Examples of accountability systems include those developed by the Access to Nutrition Foundation, which assesses the progress of major food companies towards healthier and more transparent product portfolios. A global "framework convention on healthy and sustainable food systems" (using the model of the WHO Framework Convention on Tobacco Control),[77] with which national governments would be required to comply, would provide a legal basis to drive action by all sectors.[8]

Achieving closer alignment between business and public health will require a major cultural shift.[78] Co-producing solutions to public health challenges with businesses carries risks and benefits. Creating "safe spaces" to negotiate and agree outcomes using strong governance frameworks will be important. One stepping stone to this would be to develop a shared understanding of what a healthy, vibrant, and sustainable commercial food system looks like—namely, one that balances and optimises outcomes for the environment, people, and profit.[80] The discussion started to generate UK government's forthcoming national food strategy, which involves deliberative events with citizens,[81] could provide such a template.[82]

To achieve such closer alignment of commercial and public health goals will require strong leadership from governments and international organisations. It will also require some bravery, humility, and willingness to change from both public health and commercial stakeholders.

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Emilie Aguirre, Earl B Dickerson fellow and PhD Candidate, University of Chicago Law School

Diane T Finegood, professor, Simon Fraser University, Vancouver

Chris Holmes, independent consultant, Aldershot, Surrey

Gary Sacks, associate professor, Deakin University, Burwood, Australia

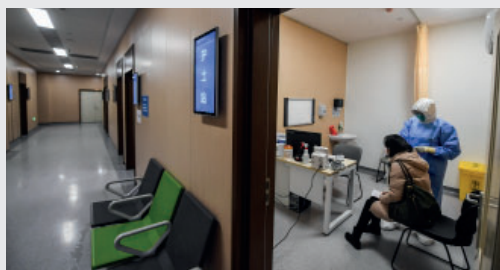Richard Smith, professor of health economics, University of Exeter

LETTERS Selected from rapid responses on bmj.com

Covid-19 fatality is likely overestimated

The final case fatality rate (CFR) from SARS-CoV-2, the virus that causes covid-19, will likely be lower than those initially reported. Previous reviews of H1N1 and SARS show the systematic inflation of early mortality estimates. Early estimates of H1N1's mortality were susceptible to uncertainty about asymptomatic and subclinical infections, heterogeneity in approaches to diagnostic testing, and biases in confounding, selection, detection, reporting, and so on. These biases are difficult to overcome early in a pandemic.

We read Xu and colleagues' report of 62 cases of covid-19 outside of Wuhan, China, with interest, as no patients died in the study period (Research, 29 February). Compared with a report of the 72 314 cases throughout China, the marked differences in outcomes from Hubei (the province of which Wuhan is the capital) compared with all other provinces are worth a brief discussion.

The CFR in China (up to 11 February) is reported as 2.3%. The CFR among the initial Wuhan cohort was reported as 4.3%, with a rate of 2.9% in Hubei province. But outside Hubei the CFR has been 0.4%. Deaths occurred only in cases deemed "critical." Importantly, the CFR from these reports is from infected, syndromic people presenting to healthcare facilities, with higher CFRs among older patients in hospital (8%-14.8% in the Wuhan cohort).

As accessibility and availability of testing for the novel coronavirus increases, the measured CFR will continue to drop, especially as subclinical and mild cases are identified. Alternatively, the CFR might not fall as much as in previous epidemics and pandemics, given the prolonged disease course of covid-19 or if mitigation measures or hospital resources prove inadequate.

As with other pandemics, the final CFR for covid-19 will be determined after the pandemic and should not distract from the importance of aggressive, early mitigation to minimise spread of infection.

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Poor leadership in Paterson case

The inquiry into Ian Paterson's case found that an NHS trust and a private provider both missed opportunities to stop him (This Week, 8 February). It concluded that there was "wilful blindness" to his malpractice, which went against the ideals of our profession. Why didn't managers and clinical staff stop this sooner? It stems partly from poor leadership.

Being open with colleagues and questioning odd behaviour is not an automatic reflex in medicine. But maybe there should be reporting systems for errant behaviour. The hierarchical nature of medical practice would have helped Paterson hide his crimes. He might have warded off unwanted questions by citing his authority as a consultant.

The discussion of the cases in a multidisciplinary team meeting as is recommended would have reduced patient harm. We cannot stop "bad" people coming into the medical profession, but we can reduce the opportunities for harm.

Gabriella CZ Gavins, locum senior house officer, Poole

Cite this as: *BMJ* 2020;368:m825

ADAPTING LEAN METHODS

Inappropriate for healthcare

Smith et al mention "lean" no less than 42 times (Analysis, 1 February). Reducing treating illness into standardised processes is inappropriate. Productivity cannot apply to the value of holding someone's hand while they die.

In 2015, secretary of state Jeremy Hunt paid Virginia Mason Institute (US purveyors of lean), £12.5m to import learning from "perhaps the safest hospital in the world." One year later, Virginia Mason failed its safety inspection in 29 key areas, including failure to provide treatment and care safely and effectively. Despite the first principles of quality improvement being recognising a mistake and not repeating it, the response has been to sell (or buy) it harder.

Much critical analysis of lean has been published, expounding on its distortion from the original concept and inappropriate application to healthcare. Academics note that it leads to re-engineering and micromanagement, intensification of the working environment, and heavier emphasis on performance management.

Nick Mann, GP, London

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We need operations management

Marrying medical autonomy to forms of operations management (such as lean thinking) is one of the greatest challenges facing healthcare. Dismissing operations management as the means to tackle the chaos that arises when multiple systems intersect makes as much sense as decrying orthopaedics as the means to deal with broken bones.

Medical staff make decisions that require others, some of them not in the same building, to do something, just because the doctor ordered it. This level of autonomy is a powerful responsibility and should be partnered with operations management specialists of similar capability to set up and run organisations that bring out the best of both worlds.

Lean is not the answer, and people should be sceptical of anyone who proposes that one aspect of some discipline will solve our problems. We need people who can manage large and complex systems to contribute as equals to solving healthcare problems.

Grant Howard, founder, The Accountable Organisation

Cite this as: *BMJ* 2020;368:m1114

Advocate for all dying people

The BMJ says that it "has long advocated for a change in the law in assisted dying." (Editor's Choice, 22 February). How much time has the editorial team dedicated to advocating for the care of all dying people? Looking back, how many articles have been advocating for assisted dying and how many for the vital steps needed to improve care of all dying people?

I am not against assisted dying, but you cannot argue that people will be free of coercion to make these decisions until we offer high quality, properly funded end-of-life care, with clinical staff effectively trained in the communication skills, attitude, and knowledge to best manage the last stage of someone's life.

Can we campaign vociferously for this first before we move onto assisted dying?

Andrew Thorns, consultant in palliative medicine, Canterbury

Cite this as: *BMJ* 2020;368:m1116

Pharmacists and assisted dying

The individual pharmacist and the profession of pharmacy must be considered in all debates on assisted dying. All forms of euthanasia and physician assisted suicide require lethal medications. Pharmacists in all working environments (drug industry, community pharmacy, hospital pharmacy, palliative care pharmacy, long term care, care of people with disabilities including intellectual disabilities, general practice pharmacists) will be part of the process.

Demand is growing for governments to carry out human rights impact assessments before adopting and implementing new policies, programmes, and projects. The right to conscientious objection is not only based on the right to "freedom of conscience," but also on article 1 of the Universal Declaration of Human Rights, which recognises that all human beings "are endowed with reason and conscience."

This includes pharmacists.

Bernadette Flood, pharmacist, Dublin

Cite this as: *BMJ* 2020;368:m1139

Doctors as healers

The emotional impact and societal message of physician assisted dying needs to be considered in the context of a society that does not value older age and wisdom but exults youth, beauty, and consumerism.

George Carey's arguments are supposedly based on compassion and lack

of harm, and he presents some anecdotal evidence that might be unreliable. The Judaic formulation of written and oral law that informs the world's main religions forbids physician assisted dying as the physician is considered a healer—a role that is incompatible with activities that intentionally terminate life.

We have many solutions to severe pain, and we need to continue to search for remedies for the lack of meaning experienced by many as they face death. This is exacerbated by the lack of worth we place on these people, which feeds into greater pain and suffering.

Let us maintain our role as healers.

Joseph Braga GP, Broadstairs

Cite this as: *BMJ* 2020;368:m1119

Hostile treatment of refused asylum seekers

Bax and Middleton discuss healthcare for people experiencing homelessness (Editorial, 30 March 2019). As is often the case, however, they do not mention migrant homelessness.

Homeless people seeking protection from returning to their countries of origin live not only in destitution but also in constant fear of deportation. For 15 years, government policy has caused intentional homelessness for those refused asylum. It compounds this—in England—with lack of free access to most secondary care.

Refused asylum seekers have support and housing withdrawn, with no legal entitlement to work. They have no recourse to public funds such as benefits and housing support. They face years, decades, of absolute poverty. They are extremely vulnerable to exploitation.

They have fled from countries with oppressive regimes, widespread violence,

and discrimination. They have come here in the hope of compassion and justice. Instead, they have fallen foul of a cynical, hostile, target driven system.

Rebecca G Macfarlane, specialty doctor in sexual and reproductive health, Glasgow

Cite this as: *BMJ* 2020;368:m1115

Undignified but important

There is much to agree with in Oliver's discussion of undignified hospital gowns (David Oliver, 8 February). The evidence of

impact on self-perception and discomfort should be taken seriously, but we mustn't detract from the need for patients to dress in a way that allows comprehensive examination.

In emergency medicine, patients are often assessed fully dressed, some appropriately, but we should encourage a culture of full examination. The ABCDE approach to managing a patient mandates "exposure" for good reasons. If we start to consider gowns the exception rather than the rule, then colleagues feeling the time pressures of busy departments are much less likely to get a patient out of their jumper, vest, jeans, socks, and boots to examine them.

So, yes to improved design, yes to maintaining dignity, yes to avoiding prolonged "gown time," but no to potentially discouraging that important E of the ABCDE approach to patients.

Anisa JN Jafar, specialty trainee year 4 emergency medicine, Manchester

Cite this as: *BMJ* 2020;368:m957

Anthony Kyriacou Antoniou

General practitioner (b 1939; q London 1964), died from cancer on 2 December 2019

The death of Anthony Kyriacou Antoniou ("Tony") has extinguished the light of one of our leading internationally respected physicians in general practice. Tony and his family came to London from Cyprus in 1951. In 1968 he bought a dilapidated, old paint factory on Abbey Road, St John's Wood. After renovations he built a super surgery that included x ray plant, ECG units, and a blood testing laboratory. At the turn of the millennium, he decided to retire from the NHS after several decades and joined Edward Rowland, Arvinder Kurbaan, and Tony Rickards in private practice at 22 Upper Wimpole Street. Tony will be heartbreakingly missed by his wife, Demitra; his children, Michael and Xanthe; his son in law, Nikolay; and his beloved grandchild, Anthony Christian, who joined the family in January 2019.

The Antoniou family

Cite this as: *BMJ* 2020;368:m656

Philip Turner

General practitioner (b 1951; q London Hospital 1974), died from pancreatic cancer on 22 November 2019

Philip Turner ("Phil") was a senior house officer at Addenbrooke's Hospital in Cambridge from July 1975 to June 1976. This was followed by a senior house officer job in orthopaedics and general surgery at Basingstoke district hospital from July 1976 to August 1977. In September 1977 he became a registrar in diagnostic radiology at Radcliffe Infirmary, Oxford; John Radcliffe Hospital; Oxford Churchill Hospital; and Oxford Nuffield Orthopaedic Centre. In 1980 Phil moved north and worked at Bradford Royal Infirmary for 13 months, before settling into general practice in Keighley for five years. He returned to hospital medicine in 1987 and back to general practice in Batley in 2001. He retired in December 2013 and was diagnosed with pancreatic cancer in the summer of 2019. Phil leaves his wife, Heather; two daughters; and four grandchildren.

Brian Lynch

Cite this as: *BMJ* 2020;368:m655
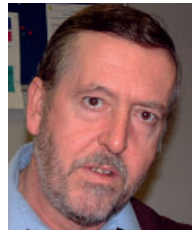
Adrian Bayley Gillham

Consultant psychiatrist (b 1948; q Cambridge/ St Mary's Hospital 1972; MRCP (UK), MRCGP, FRCPsych), died unexpectedly from severe coronary atheroma on 21 January 2020

Adrian Bayley Gillham started his career in general medicine at St Mary's Hospital. He then became a principal in general practice in St Albans, where he initiated the first vocational training scheme. In 1985 he joined the Royal Army Medical Corps as a senior house officer in psychiatry. He was appointed consultant psychiatrist at the Cambridge Military Hospital in 1993. He commanded a battle shock recovery unit in the first Gulf war, became a lecturer in psychiatry and examiner for the Royal College of Psychiatrists, and rose to the rank of lieutenant colonel. After leaving the army, he worked for the NHS before joining the Priory Hospital in Woking in 1997. He leaves a loving wife of 45 years, four children, and six grandchildren.

Georgina Calvert

Cite this as: *BMJ* 2020;368:m657

Theodore Michael Strouthidis

Consultant geriatrician (b 1937; q Alexandria University, Egypt, 1962; FRCP), died from multiorgan failure on 14 July 2019

Theodore Michael Strouthidis moved to the UK in 1965 and met his future wife, Vicky, during his first week as a house physician at St Helier Hospital. He applied for the post of cardiology registrar at St Helen's Hospital, Hastings, but was offered the geriatric registrar post and was subsequently appointed consultant in Hastings in 1972. With colleagues he ran one of the most forward looking acute geriatric services in the south east of England, pioneering continuity of the principles of early diagnosis of elderly patients with early rehabilitation, throughout managing the heavy workload with apparent ease. Theodore spoke five languages fluently and was the medical adviser of a travel insurance company. He leaves Vicky, two sons, and a granddaughter.

Stuart Bruce, James Dennison

Cite this as: *BMJ* 2020;368:m662

Annemarie Tupper

Consultant in neurological rehabilitation (b 1921; q Royal Free, London, 1952; DObst RCOG, DPhysMed Eng), died from bowel obstruction on 26 October 2019

Annemarie Tupper ("Mimi") arrived in England as a Jewish refugee from Vienna in 1938. She worked at a general practice in Wimbledon for eight years. From 1967 she worked as a registrar at the medical rehabilitation centre in Camden Road, London. She became deputy medical director of the Wolfson Medical Rehabilitation Centre, attached to Atkinson Morley Hospital. In 1976 Mimi was appointed consultant in rehabilitation medicine at University College Hospital, and was involved in setting up one of the country's first dedicated stroke units. After retiring she continued as an occasional consultant at Banstead Place Mobility Centre and trained as an NHS counsellor. She leaves three children, four grandchildren, and two great grandchildren.

Julie Webb

Cite this as: *BMJ* 2020;368:m660

Nicholas Godlee

Consultant radiotherapist (b 1928; q Cambridge University 1951; FRCR), died from old age on 30 December 2019

Nicholas Godlee came from a medical lineage: his great uncle, Sir Rickman Godlee, the first neurosurgeon to successfully remove a brain tumour, was himself the nephew of Joseph Lister, pioneer of surgical asepsis. Popular with his patients and juniors, Nicholas spent most of his career at UCH, as a consultant radiotherapist from 1963 until retirement in 1993. His oncological interests were general and wide ranging. At a time when the field was being revolutionised by chemotherapy, he emphasised multidisciplinary team working and joint clinics. Prominent among these was the service he set up with Kenneth Till at Great Ormond Street to treat paediatric brain tumours. Outside medicine, he was an accomplished viola player and pianist. His four children are doctors, and of his 13 grandchildren, three have trained in medicine.

Kate Womersley

Cite this as: *BMJ* 2020;368:m658
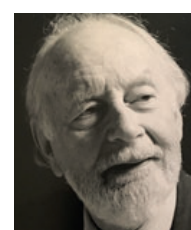
John Wyn Owen

Former director of the NHS in Wales, who introduced the concept of "health gain"

John Wyn Owen approached his death in the same way as his life as director of the NHS in Wales; director general of the New South Wales Health Department in Australia; and secretary of the Nuffield Trust in London.

In his final weeks he had a medical appointment; the consultant asked if he had any questions. He replied: "What questions should I have?" He asked this question repeatedly in his professional life. A highly skilled listener and a visionary leader, he was acclaimed for leading from the back, like the shepherd quoted by Nelson Mandela, who stays behind his flock, "letting the more nimble go ahead, whereupon the others follow, not realising that they are being directed from behind."

Global health is a local matter

Owen combined a talent for team building with a passion for public service, reflecting his socialist values and Welsh chapel upbringing. He learnt and spoke Welsh with great pride, but he was as much an internationalist as a Welshman from (very important to him) north Wales. One of his mantras was that global health was a local matter. This may resonate far more now, in the era of covid-19 and global warming, than in the 1980s and 1990s when he began promoting it.

Educated at Friars School, Bangor, and St John's College, Cambridge, Owen worked in health service administration in London and Wales before becoming a director in 1979 of United Medical Enterprises (UME), a UK owned company developing health services in the Middle East and Canada, and working with international agencies such as the World Bank and the World Health Organisation. The company received the Queen's award for export achievement in 1983.

In 1985 he returned home as first director of the NHS in Wales. He was not a stand-up-on-the-rostrum-and-shout-it-out kind of leader. Colleagues recall how, for example, he would drop in, unannounced, to a rural community hospital in Powys to ask the nurses and other staff how the health department in Cardiff could help them do things better.

Health gain

A few weeks before his death Owen singled out as the highlight of his career the development between 1989 and 1993 of the Welsh NHS strategic intent and direction, especially the introduction of the concept of "health gain"—years to life and life to years. This evolved from a partnership between NHS Wales and the Welsh Health Planning Forum, part of NHS Wales. Judged to be the most successful strategy the National Audit Office had evaluated, it generated extensive international interest. The forum became a WHO Collaboration Centre for regional health strategy, planning, and management development and won awards in Europe and the US.

There was no better time for Owen to have consolidated his international reputation. In 1993 he was invited to become director general of the New South Wales Health Department in Australia, after he felt forced to resign from Cardiff subsequent to a major disagreement with John Redwood, the new secretary of state for Wales. Redwood insisted that the NHS would flourish only under market conditions.

Morton Warner, executive director of the Welsh Health Planning Forum from 1989 to 1995 and a close friend of Owen's, said, "His simple, well grounded approach could be problematic, though he mostly won the day. From time to time there would be a clash of arrogances as he locked horns with senior politicians he thought to be ideologically blinkered. He took his responsibilities to speak truth to power seriously and sometimes suffered the consequence."

Owen further enhanced his international reputation during four years in Australia. In December 1993 he became secretary of the Nuffield Trust in London and developed the UK's role in promoting global health. He also advised Foreign Office ministers about what he saw as their responsibilities. He promoted the WHO concept of One Health, which emphasises that human, animal, and environmental health are inseparable.

During the past 10 years Owen pondered what his legacy might be. He and Warner agreed that it would most likely be vested in ideas and that these would be spread by friends and colleagues. His idea that global health is a local matter will surely live on, but will those in power take it to heart? The world's response to covid-19, among other things, may provide an answer.

Owen leaves his wife, Liz, and their two children, Sian and Dafydd.

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A highly skilled listener and a visionary leader, Owen was acclaimed for leading from the back