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REASSESSING “GOOD” MEDICAL PRACTICE AND THE CLIMATE CRISIS

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ABSTRACT:

In August 2023, the GMC released the latest update of Good Medical Practice, which sets out the standards of patient care and professional behaviour to be expected of UK doctors. These updated guidelines offer some environmental considerations, which previous standards did not include. This paper explores these latest additions to Good Medical Practice through the healthcare ethics lens of non-maleficence, beneficence, justice and autonomy, alongside trust and physician wellbeing, to make the case that the latest updates to Good Medical Practice do not go far enough in specifying the duties for doctors in responding to the climate and ecological emergency, to be seen as ethically justifiable.

The paper argues that given the health implications of the climate crisis and the harms associated with high-emission healthcare, as well as the co-benefits of climate action on health, there must be a stronger commitment from the medical regulator to ensure the groundwork is set for doctors to learn, understand and advocate for the importance and urgency of practicing sustainable healthcare. The case for this is strengthened by also examining the importance of maintaining public trust in the medical profession as advocates for public health, along with the notable societal and generational injustices that continue to deepen as the climate emergency escalates.

The paper concludes by arguing that doctors can and should be a part of writing a new chapter for health in the climate era, but our standards for practice need to offer a strengthened starting point of consensus for what is expected of the medical profession for that to come to fruition and raises questions as to what doctors can and should do when they have questions over their own regulators' commitment to maintaining public health in relation to the climate and ecological crisis.

REASSESSING “GOOD” MEDICAL PRACTICE AND THE CLIMATE CRISIS

Introduction

The General Medical Council (GMC), the regulator for the medical profession in the United Kingdom (UK), aims to “protect patient safety and improve medical education and practice across the UK”.(1) In August 2023, the GMC released the latest update of Good Medical Practice, which sets out the standards of patient care and professional behaviour to be expected of UK doctors.(2) Whilst the updated guidelines do offer some environmental considerations, which previous standards did not include, it has been suggested that failure to strengthen the regulator’s position on the need for greater environmental awareness by practicing doctors was “a missed opportunity to embed sustainability in ethical standards”.(3)

This paper argues that given the scale of the health implications of climate and ecological breakdown and the harms associated with high-emission healthcare, as well as the co-benefits of climate action on individual and population health, the latest update of Good Medical Practice does not go far enough in specifying the duties for doctors in responding to the climate emergency, to be seen as ethically justifiable. Moreover, we argue that the importance of maintaining public trust in the medical profession as advocates for public health, along with the notable societal and generational injustices that continue to deepen as the climate emergency escalates, strengthens the case for a stronger commitment from the medical regulator to ensure the groundwork is set for doctors to learn, understand and advocate for the importance and urgency of practicing sustainable healthcare.

The updated standards to Good Medical Practice

In Domain 1 of Good Medical Practice (which lays out what is expected in terms of the knowledge and skills of doctors) two duties have been added under a new sub-heading on “managing resources effectively and sustainably”. These duties are (2):

“You must make good use of the resources available to you, and provide the best service possible, taking account of your responsibilities to patients and the wider population.”

and

“You should choose sustainable solutions when you’re able to, provided these don’t compromise care standards. You should consider supporting initiatives to reduce the environmental impact of healthcare”.

We will now argue that these additions do not go far enough, given the scale of the health implications of climate breakdown and the associated carbon costs of healthcare.

The scale of the health implications of climate breakdown

The climate crisis has been described as the “greatest global health threat of the 21st century”, due to the direct impacts on health from exposure to extreme weather and indirect implications from changes in physical, natural, and social systems on which health depends.(4) Access to basic human needs, including clean air, food, water and shelter are increasingly threatened as climate breakdown escalates, with scientists describing Earth as now being “outside of the safe operating space for humanity.”(5) Health leaders have repeatedly called for action to minimise the alarming consequences that climate breakdown is expected to have on human health.(6)

There were over 3000 excess deaths during the UK 2022 heatwaves (7), with increased heat associated with cardiovascular and respiratory complications, as well as poor outcomes in pregnancy and the newborn period. (8) Heatwaves are also associated with increased rates of mental health hospital admissions and suicide. (9)

The health consequences of climate change extend far beyond heat-related illness to include water-borne diseases, allergies and asthma, malnutrition, and diarrheal disease. (10) Rises in vector-borne diseases are also expected because of climatic changes with, for example, the discovery of Tick-Borne Encephalitis Virus in the UK in 2019. (11) Moreover, escalating

frequency and severity of extreme weather events leads not only to injuries and fatalities, but also mental health implications, with one third of flood victims reported to experience Post-Traumatic Stress Disorder (PTSD) (12), which is particularly alarming given the projected flood risk for the UK. (13) Causes of climate change are also responsible for air pollution, which is associated with over 30,000 UK deaths per year. (14)

Therefore, it is abundantly clear that the climate and ecological crisis is a health crisis and should be treated as such. This health crisis extends beyond rising disease prevalence, including increased strain placed on healthcare services due to climate-related health consequences. UK hospital admissions notably increase during heat waves (108,722 excess hospitalisations associated with warm days) (15), with estimates that the direct damage health cost of climate change is between 2 and 4 billion US dollars per year.(16) Moreover, as global environmental degradation continues, leading to mass displacement of peoples, this will also undoubtedly lead to mounting pressure on health systems too. (17)

Healthcare infrastructure is also vulnerable to the impacts of climate change, further posing a risk to healthcare delivery. Flooding is a particular climate risk in the UK, with 10% of hospitals at risk, and a history of widespread disruption to healthcare as a result. (18) (19) Moreover, extreme weather events threaten global healthcare supply chains, adding yet another layer of risk to climate-induced health challenges. (20)

In view of these well-established health consequences, many royal colleges and organisations have declared a climate emergency, and although some have made great strides in their commitment to sustainability (21), it is not always clear what this means in practical terms. It does, however, send a clear message that healthcare leaders recognise the threat that climate and ecological breakdown poses to health.

In turn, given the scientific consensus regarding the harm and suffering that is increasing for humanity as a result of the climate crisis, the latest update to Good Medical Practice fails to acknowledge this severity, and offers very little guidance for doctors as to what their role in the biggest health crisis of our time should be. Given the health implications of the climate crisis as

laid out above, we argue the standards for doctors defined in Good Medical Practice must go further with, in particular, a strengthened position on the importance of practicing sustainable healthcare, especially considering healthcare's contribution to carbon emissions which we will next explore. The GMC's Q&A document elaborating on its new sustainability requirement, published on the day that Good Medical Practice came into effect, also failed to sufficiently address the scale and urgency of action to protect health, even were doctors to see this addendum. (22)

Non-maleficence and the carbon cost of healthcare

Whilst the NHS and its role in delivering healthcare is often seen as a positive contribution to people's lives, the double-edged sword is the associated carbon and other environmental cost of healthcare which, as discussed, has the potential to be deeply harmful to human health. The guiding principle for doctors is "Primum non nocere"; First do no harm, referring to the core principle of non-maleficence, which describes the duty to avoid wronging or inflicting harm on another.

When considering non-maleficence in healthcare, it is important to acknowledge that the healthcare industry contributes 4 – 6% of global greenhouse emissions, with the NHS accounting for 5% of UK total emissions and 40% of public sector emissions.(23) This is thought to be roughly the same volume of emissions as entire countries, like Denmark or Croatia. Thus, even as patients are being treated for climate-induced health consequences, their treatments produce more carbon, locking healthcare into a vicious cycle whereby medical care causes medical need. In turn, the NHS was the first healthcare system to commit to being Net Zero by 2045, a commitment that is now enshrined in law. (24)

Whilst all patient care contributes indirectly to emissions through the way it is delivered, some of this care contributes directly, such as potent greenhouse gases used in anaesthetics or in certain inhalers totaling 5%, with clinical care making up two thirds of the NHS carbon footprint.(23) Care does, however, have the potential to be more (or less) environmentally sustainable, and in turn less harmful to human health, depending (partly) on the choices made

by clinicians in consultation with patients.(25) These choices may include discussion of whether intervention is desirable at all (26), the medication that is prescribed, the choice of equipment used, the frequency of patient monitoring and the method of delivery of care, amongst others. It also depends on how much emphasis is placed on preventative strategies, or health creation methods such as green and blue social prescribing, along with whether clinicians empower patients in their care, instead of purely focusing on treating disease once it arrives.

Whilst we do not have full details of what a net-zero healthcare system looks like, or a detailed carbon breakdown of every aspect of care, consensus does exist on what sustainable healthcare involves. (25) Moreover, there are already a multitude of resources, guidance and tools which exist to support clinicians with sustainable clinical decision-making and sustainable quality improvement in order to streamline care, ensuring patients receive the right care at the right time, and that, where available and with patient agreement, effective low carbon solutions can be implemented. (27)

However, when it comes to non-maleficence in this context, the answer may not always be straightforward. Non-maleficence (and indeed beneficence, to be discussed later) can be described as “imperfect” duties; ones that are still duties but where there is some flexibility on how they are fulfilled. (28) For example, what should doctors do when one treatment is more effective than another for a patient, but the more effective treatment has such significant environmental impacts that its use harms others? The updated GMC guidance answers this in part by stating “*You should choose sustainable solutions when you’re able to, provided these don’t compromise care standards.*” However, this puts high-quality care against sustainable care, which is a false dichotomy since sustainability itself is recognised as a domain of quality in healthcare.(29) It may be for other institutions, such as NICE, to set treatment guidelines and decide where the harm should fall, but this steer from the GMC is, at best, unhelpful in addressing this moral dilemma, and at worst, putting the patient sat in front of the doctor against those who are not. The GMC is also internally inconsistent in its requirements, as it positions sustainable healthcare as a prerequisite of qualifying as a doctor (30) and has included the Medical Schools Council’s curriculum on Education for Sustainable Healthcare (ESH) in its list of documents that informs its *Outcomes for Graduates* (31).

Moreover, the suggestion that doctors should merely “*consider supporting initiatives to reduce the environmental impact of healthcare*” suggests that practicing more sustainably should be seen as optional. It gives the appearance that doctors can just decide adhoc whether to practice medicine that is known to be less harmful or not. Reaching net zero requires dedicated effort so relying on voluntary progress alone is not only impractical but, when considering our duty of care to patients, utterly irresponsible. When guidance exists to support doctors in this space, it seems unjustifiable to suggest our profession’s grounding principle of “First Do No Harm” is merely optional, rather than a prerequisite for qualified doctors, when it comes to providing sustainable healthcare.

However, it is not purely the minimisation of harm that justifies a stronger focus on sustainable healthcare, but rather that there are huge benefits of sustainability and climate action to improving human health. This, and the associated ethical principle of ‘beneficence’ will be discussed next.

Beneficence and the co-benefits of climate action

Beneficence refers to the duty to act for the benefit of others. This is important in healthcare where special relationships exist which enforce “role-derived obligations” on physicians to act beneficently towards patients. (32)

There is mounting evidence for the co-benefits of climate action on health, such as active travel, plant-based diets and time spent in nature, amongst others. (33, 34) Moreover, the interdependence of human health and planetary health adds further weight to this argument as, put simply, you cannot have healthy people on a sick planet. In that respect, practicing medicine with the planet in mind will, in turn, improve human health. By failing to emphasise sustainable healthcare as a crucial requirement of Good Medical Practice, the updated standards seem to offer a flawed belief that, somehow, patient welfare is disparate from

Earth's life sources upon which we all depend. Viewing humans as separate from nature is empirically false since every breath we take is dependent on our natural environment. (35)

Moreover, it suggests a misunderstanding of what the meaning of sustainable healthcare and sustainable value is. Sustainable value is defined as “delivering the best possible health outcomes with minimum financial and environmental costs, while adding positive social value at every opportunity”.(36) This definition and the associated tools and guidance to improve care in this way, recognises the reality that there are finite environmental, financial and societal resources available to deliver high standards of care. As acknowledged by the GMC in its Q&A, sustainable healthcare “focuses on the improvement of health and better delivery of healthcare, rather than late intervention in disease, with resulting benefits to patients and to the environment on which human health depends, thus serving to provide high-quality healthcare now without compromising the ability to meet the health needs of the future”.(22)

Practicing healthcare and health improvement with this understanding is focused on finding ways to *add* sustainable value, and not, as the updated standards suggest, to detract from clinical care. In other words, the wording of the updated standards suggests a failure to appreciate that sustainable healthcare *is* about enabling good care, not just for the patient in front of us, but also for those that are not. This includes the need to acknowledge future generations which forms part of NHS England's mission statement; “health and high-quality care - now *and for future generations.*” (37)

Thus, we must now turn our attention to the ethical principle of justice, and the profound generational and societal injustices that the climate crisis both creates and exacerbates.

Climate justice

Theories of healthcare justice emphasise the core value of health for all, regardless of personal characteristics such as gender, age, ethnicity, birthplace, social status and so on, as well as the more traditional view of justice in distributive terms—as in the fair distribution of burdens and benefits. (38)

Clearly countries export much of the harm created by their emissions since Earth's atmosphere intermixes globally, with the discovery of "enormous global inequity" where the highest emitting countries are the least vulnerable to the negative impacts of climate change. (39) This inequity is compounded by inherently unequal social systems which, in turn, leaves the most vulnerable and oppressed populations most at risk. This intersection between social justice and the climate crisis is often referred to as "climate justice." (40) A prime example is the catastrophic floods in Pakistan which saw huge swathes of the country submerged underwater, despite being a minimal contributor to global emissions. (41)

One must wonder if the UK were experiencing climate consequences on a similar scale, whether there would be a greater sense of urgency to act. Whilst the UK has and will continue to experience a rise in climate consequences, at present, we are a country of relative privilege in the global climate context. The non-committal language in Good Medical Practice insinuates a disregard for the burden that our high-emission healthcare has on citizens in countries most affected by the climate crisis, who do not benefit from that healthcare themselves. In that respect, the Eurocentric perspective of the standards fail to acknowledge the ethical responsibility industrialised countries have to minimise the devastating consequences their emissions have on other, less privileged countries around the world. (42)

That said, similar divides exist at domestic level too, with climate consequences mirroring systemic inequities in the UK alone. (43) Health already mirrors wealth, with those in deprived communities and communities of colour experiencing poorer health and shorter life expectancies. (44) The notion of climate justice recognises it is these same groups that will be burdened the most by climate change, whilst also being the least able to adapt.

The justice case also extends to the generational injustice that the climate emergency creates. (45) Children have little agency or power over environmental degradation but will be worst affected as the climate crisis escalates, with predictions of an unlivable world for future generations. (10) The climate movement has arguably been a movement of younger generations (46), with the crisis casting a dark shadow on their childhood (47), whilst they attempt to undo the damage caused by previous generations.

This imbalance of generational responsibility has already played out in medicine with medical students having played an instrumental role in advocating for education for sustainable healthcare and planetary health which led to the GMC acknowledging a need to update this in their standards and outcomes. (48, 49) Institutions with great power, like the GMC, should not be relying on medical students to be the primary drivers for the change we urgently need within our institutions.

Thus, to practice 'just' medicine, there is a need to acknowledge the social and generational injustices, and the relative privilege and in turn responsibility of the UK healthcare system and its associated bodies, in mitigating that injustice. Whilst it would be unreasonable to suggest doctors have a responsibility to mitigate all existing injustices, practicing sustainable healthcare (and in turn minimising the harm caused to already vulnerable peoples, who are least likely to have contributed to global emissions and less likely to have benefitted from said high-emission healthcare) is a feasible and realistic expectation to set out more explicitly in the standards for UK doctors, especially given the benefits that have already been described.

Having explored three of the four pillars of medical ethics, we will discuss the final pillar: respect for autonomy.

Autonomy

Informed consent is based on the principle of respect for autonomy, which maintains capable adults can make their own decisions when they have proper information. Autonomy and informed consent are foundational to Good Medical Practice, yet the updated guidance gives no steer to doctors as to whether they should include discussions on environmental harms caused by particular treatments as part of the consent process (for example, when choosing an inhaler) as they would with other treatment "side effects." Is it not reasonable that patients should be aware that treatments they receive may lead to a requirement for more medical interventions, should they (or others) encounter climate-induced health hazards later down the line? Bringing climate-consciousness into discussions with patients – the notion of "green

informed consent" seems especially pertinent where low-carbon treatment alternatives are available. (50)

As it happens, research (51) and case studies (52) have demonstrated the public are concerned about the health impacts of climate change, with broad public support for a range of decarbonising measures, including patients willing to change their own behaviours (such as returning unused medications), and responding positively to exploring low-carbon treatments. When we assume our patients would not prefer to make climate-conscious decisions about their health, are we not reverting to outdated paternalism, rather than truly respecting their autonomy as decision-makers in their care? (53) Moreover, is having truthful and open conversations with patients not part of what generates trust in the medical profession? A topic we will now explore.

Trust in the Medical Profession

Patients have 'normative expectations' of their doctors, which makes up part of trust-based moral relationships.(54) These normative expectations are beliefs about what people *should* do combined with predictions about what they *will* do. Patients who trust doctors expect that they should keep them from harm and that they will keep them from harm. Additionally, doctors have "epistemic obligations" to patients due to their specialist and expert knowledge of medicine and health. (55) This imbalance of knowledge places greater responsibility on doctors to uphold the expectations of their patients, which are formed by the implicit contract of trust that exists between doctors and patients. (32)

As part of these expectations, obligations and implicit contracts, the public expects doctors to campaign on matters that are important to health. In fact, research has consistently highlighted the high level of trust placed in doctors, which allows them to discuss broader societal issues and be heard when they do so. (56) (57) For example, the medical profession successfully campaigned for the UK smoking ban which undoubtedly improved patient outcomes. (58)

It is possible then, given the expectations of patients on doctors, and the alarming health consequences of climate breakdown, that an important part of meeting those expectations and upholding trust in the profession is not only to practice medicine more sustainably (and in turn, less harmfully), but to also advocate for an urgent public health campaign on the climate crisis, in a similar vein to smoking campaigns. (59)

Thus, the key role the medical profession holds in this health crisis ought to be endorsed and strengthened in the duties laid out for doctors, rather than watered down into optional statements of little value. There has never been a more crucial time to utilise the medical profession's trusted voice to make a clear public statement that highlights the fierce urgency of the changes required to protect health. In that respect, it seems right to conclude as the Director and Chair of the UK Health Alliance on Climate Change did, that the update to Good Medical Practice was a "missed opportunity" to demonstrate that the medical profession warrants the public trust that is placed in them by recognising the importance of sustainable healthcare and climate action as core to our roles, as advocates of public health. (3)

Failing to uphold our responsibility to public health considering the climate emergency may also have implications for physician wellbeing which we will now explore.

Moral distress

Occupational moral distress is commonly seen in healthcare because of resource constraints that staff face, meaning they cannot provide the standard of care they want or expect to be able to deliver, resulting in a deep violation of one's own moral code, leading to feelings of guilt, anger, and disgust. (60)

Just as Government inaction on climate change is linked to psychological stress in young people (47), it is not unreasonable to assume the scale of the health implications of the climate crisis will increase moral distress in healthcare professionals, who not only have to treat the climate-related health conditions, but may also experience a sense of guilt or responsibility for the high-emission care they provide. Just as we saw escalating rates of moral injury and traumatic stress

during the pandemic, is it not likely continuing with “business– or healthcare as usual” will lead healthcare professionals to suffer, either directly or vicariously in response to the escalating health impacts of the climate emergency they will increasingly have to respond to?

Moreover, whilst research is needed in this space, the authors are aware of anecdotal reports from physicians that sustainable practice improves their own wellbeing. This may add to existing work suggesting that being active in climate work may provide a valuable outlet for emotions associated with climate breakdown. (61) Therefore, as an added benefit to what has already been discussed, a stronger emphasis on sustainable healthcare within Good Medical Practice could prove protective of physician wellbeing.

Conclusion

The latest update to Good Medical Practice would have been the prime opportunity to refocus medical minds on the time-critical nature of climate action and the need for sustainable healthcare as a core practice for doctors to learn, understand and advocate for.

Given the climate crisis is escalating at pace, we can no longer avoid the realisation that the medical profession must engage directly with the existential questions about our collective purpose which are posed by the growing threat to human health. Doctors can and should be a part of writing a new chapter for health, one that relies on a thriving, regenerative, ecological future, but our standards for practice need to offer a strengthened starting point of consensus for what is expected of the medical profession for that to come to fruition.

One method to begin to enable this would be to ensure ‘sustainability’ has a domain of its own within Good Medical Practice standards to allow it to be seen as a core focus of practice, rather than a weakly worded bolt-on to an existing domain. This was, in fact, proposed by the UK Health Alliance on Climate Change and other expert bodies and individuals in June 2022 during the Good Medical Practice review, offering a publicly available suggested domain centred specifically on sustainability, with laid out steps that doctors could be reasonably expected to

take to develop their knowledge and ability to practice medicine in a way that would “protect patients, the wider community and the environment, both now and in the future”.(62)

However, this and other realistic suggestions were not incorporated into the 2024 Good Medical Practice standards.

With this in mind, and when considering the arguments that have been presented in this paper with regards to the medical profession’s founding ethical principles– when aspects of medical practice are known to be harmful, unjust, and unappreciative of a better, healthier, and fairer way to practice– can the latest update for Good Medical Practice, truly be described as “good”?

The standards do, however, emphasise a responsibility to “act promptly” and raise concerns if doctors believe patient health is at risk. What, then, are doctors to do when their own regulator’s failure to be more explicit around the role of doctors in climate action forms part of that risk?

It is beyond the scope of this paper to explore this question in the detail it deserves, but it may be worth noting that healthcare professionals are becoming increasingly frustrated by Governments and other responsible organisations who are not responding sufficiently to mitigate the threat of the climate emergency, with many risking their own personal freedom and professional registration undertaking acts of nonviolent civil disruption in the name of safeguarding public health.(63) Perhaps it is time, given both the urgency of the climate crisis and the ethical principles laid out in this paper, that institutions with great power, like professional regulators, reflect on whether they themselves are meeting their own primary legal and moral duty of protecting the public’s health with regards to the climate and ecological crisis. If not, then the next important philosophical question to ponder is “*quis custodiet ipsos custodes?*” - who will guard the guards themselves?

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