"Should we Sacrifice Health for the Climate?"

Lecture delivered by Anand Bhopal on 19th January 2022 to a meeting of Selskapet til Vitenskapenes Fremme.

Since around the year 1850 – *'pre-industrial times'* in climate parlance – greenhouse gas emissions, especially carbon dioxide, have increased. Slowly at first, then all of a sudden.

For those born in the 1960s, two-thirds of all carbon emissions have occurred in your lifetime. Born at the turn of the Millennium? The figure is one third.

This great acceleration has occurred during the lifetime of the very institutions set up to address climate change.

Since the establishment of the United Nations Framework Convention on Climate Change, the 1st Assessment report of the International panel on Climate change and – of course – the Brundtland Commission, total emissions have doubled.

This is problematic since temperature rise is a product of total emissions. Not where they occur or how they fall relative to GDP. Not even whether they occur this year or next. We have a 'carbon budget'. And at current rates the budget for 1.5 degrees of warming will be exceeded in 7 and a half years.

With the world at a standstill in March 2020, the rise was briefly slowed, before rebounding to an all-time high in 2021.

This needs to change.

The majority of greenhouse gas emissions I am referring to are a product of fossil fuel combustion, undertaken to heat, make and move things. These are sometimes essential for human welfare, sometimes give enjoyment and all too often provide neither.

Thankfully, we know from scientific research that rapid and deep cuts to emissions can slow global warming, giving countries, as the Christine McKenna and colleagues note *"the necessary breathing space to prepare for the impacts that rising temperatures will bring."*

There is no sustainable level of emissions – it is too late for that - however, we still have a window of opportunity to intervene.

As the sustainability scientist Dr. Kimberley Nicholas puts it: "It's warming. It's us. We're sure. It's bad. We can fix it."

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3 years ago, researchers examining healthcare's carbon footprint found that globally healthcare is responsible for between 4-5% of global emissions. More than dirty industries

like shipping and flying. And worryingly researchers have found emissions are rising every year.

Although climate change is fundamentally a health problem – *a looming threat of human extinction is surely the greatest health problem of all?* – the health community has only recently found its voice in the global climate arena.

Armed with not only knowledge that climate change impacts represent an important, if still relatively poorly understood health threat, but evidence that healthcare – *the place of healing* – is also a major polluter.

At the COP26 climate summit hosted in Glasgow late last year, health was one of three Science and Innovation priority areas in the 'Presidency Programme'. The World Health Organisation also had – for the first time – a dedicated health programme where governments were asked to sign up to two commitments.

The first to develop plans for a 'climate resilient health system'. Few objected to this. The other commitment is to develop a zero carbon, sustainable health system. A harder sell. However, to date, 46 countries have signed up, with 14 countries setting a specific date to reach net zero emissions. *Including Norway*.

Which brings me to the crux of this talk: in the face of the climate challenge and the need to urgently cut emissions, should we sacrifice health for the climate?

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I asked friend his gut feeling on the title of today's talk - his response: who's 'we'?

Is it the Pacific Islands and small island states for whom 2 degrees of warming is a death sentence?

Is it Bangladesh where devastating floods and landslides have displaced 12 million people, as a third of the country lies underwater.

Is it Ethiopia where health facilities have no electricity, nor road access, and are increasingly precarious to climate induced droughts.

Or is it us – here, now – in this room – who have the choice, the power to decide whether to change what we do, how we do it and why.

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The climate debate and the relative value of early vs. delayed action has been predominantly framed around price. Willingness to pay, monetised harms and benefits, feeding into cost-benefit analyses. The relative benefits of averting this man-made crisis with certainty pitted against the optimism that new technologies, research, human ingenuity – even artificial intelligence – will save us.

In other words, a willingness to compromise the fruits of economic growth achieved since industrialisation for the benefit of future generations who we may never know.

Or put in the language of 'Don't Look Up': there those who wish to avert the looming catastrophe at whatever cost, and those who support the jobs the comet will provide.

However, sacrifice comes in many forms – not only monetary costs.

Sacrifice is to change what you do. To change how you do it. It is a willingness to listen. It is to really listen. Sacrifice is to empathise. It is a willingness to act and not to act. To protect my family and yours. To secure our generation while safeguarding generations to come.

Economists have long favoured (and often still favour) a global carbon tax, which could – theoretically – be the most financially efficient way to tackle climate change, sustain economic growth and – depending who you believe – alleviate poverty. After decades of international negotiations, steadily increasing global greenhouse gas emissions, and global temperature rise, this approach has reached the end of the line.

Unlike a couple decades ago years ago, we can at least say that there is a global consensus on the existence of climate change. After years of stalling, distracting and derailing international climate negotiations process, today fossil fuel companies have net zero strategies.

The influence of climate denialists is waning, however, this in itself is not a solution. A consensus around the scientific facts, though – crucially – not what to do about it, led to a calamitous conclusion to COP15 in 2009.

Out of an ashes of Copenhagen, an alternative approach emerged, pioneered by the Nobel Laureate Elizabeth Ostrom, known as polycentric governance.

This is a bottom -up process whereby sectors, businesses, regions, and governments set targets themselves, guided by a fair share principle to guide the balancing the costs and burdens of climate mitigation and adaptation with global responsibilities and the capacity to act.

The world is an unequal place. It cannot be forgotten or airbrushed out that the *world's richest 1% is responsible for double the emissions of the world's poorest 50%.* No less so in healthcare.

Healthcare's per person carbon footprint in rich countries is 70x higher than in low-income countries. The USA, perhaps unsurprisingly, is an outlier. 3 times higher again than rich country average.

Health improves with a country's healthcare carbon emissions only up to a point. After that the emissions are increasingly inefficient, with the USA a prime example.

Meanwhile for billions of people around the world healthcare is of poor quality or inaccessible.

Despite a quadrupling of the global economy over the last 30 years, the numbers of people living in *extreme poverty* in sub-Saharan Africa has almost doubled from 280 million in 1990 to 432 million in 2017, in line with population growth. And COVID-19 has made things worse.

4.5 million children died last year.

The UN estimates that child mortality rates 2100 will be 1.13%. The level as Norway 121 years earlier.

As my friend said, who are '*we*' when it comes to sacrifice?

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So let me put this another way, should you – here in this room – sacrifice your health for the climate. Even a little bit?

You as an individual make a difference. Every emission, no matter how small causes warming. Warming affects earth systems which contribute to extreme weather events, biodiversity loss, sea level rise and the growing risk of passing critical tipping points in the climate system leading to irreversible and uncontrollable climate breakdown to natural systems and harms people.

Choosing the low-carbon asthma inhaler. Opting to try diet and exercise, rather than reaching for the pills. Cycling to work, eating less meat, drinking less, kicking the cigarettes. Every little makes a difference.

This thinking, while partly correct, is also one of the greatest causes of inaction.

We as individuals can do things – change our lives in ways which are often good for our health and good for the climate. However, this is not even close – even if we all do it (which is unlikely) to cutting healthcare's climate footprint in an ageing society with growing burden of chronic diseases.

This thinking reflects, in part, the prevailing political discourse that health is a product of individual choices. It takes health and healthcare to be interchangeable. The evidence is far more nuanced.

Health is far more influenced by socioeconomic status and health behaviours (*in turn tightly linked to education*) than availability or quality of healthcare itself.

As we have seen during the COVID pandemic (I couldn't *not* mention the pandemic….) there are deep rooted inequalities within and between our societies, expressed over the last 2 years as the susceptibility to disease, vulnerability its effects and capacity to avoid passing it on.

However, this is nothing new.

There is undoubtedly low-hanging fruit and things we

Working as a junior doctor in the east end of Glasgow, the spiritual home of Michael Marmot's work on social determinants of health, where two areas only a few miles apart had a 28-year life expectancy difference. I saw first-hand how health inequalities pervade not only life but death too. Smattering of personal belongings, get-well cards, mourning relatives – in some patients' rooms, contrasting with the bare emptiness of others. It is not just inequalities between countries that matter – inequalities within them matter too.

The COVID response was put on a war-footing. Karnataka state in India had a COVID War Room (award winning for its integration of tech). Boris Johnson brought in the military. Trump put America at war with itself.

A war-footing is to operate under a state of war *or as if a war existed.* COVID-19 heralded an era of unimaginably intrusive, paternalistic, expensive and harmful government interventions justifiable for the greater goal.

The pandemic has shown that people care about their health. They care about one another. They are willing to make sacrifices. And they are furious when other people flout the rules (see Operation Big Dog).

Crucially, when clearly communicated, and financially and socially supported to do so, people can undergo transformational, unimaginable changes in how they live, work, and even breathe.

Can efforts – should efforts – to cut carbon emissions from the healthcare sector be put on a war footing too?

The NHS in England has pioneered this work to develop a net zero health system. They have had early successes and other countries are following suit. But the road is long, winding and heading into the unknown.

The key question here is not: "*can we make progress*?", but rather "*can we make progress fast enough*?" and will we be able to take the people – staff, patients, families – along too?

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There is a lively debate underway in the UK where a growing number of concerned healthcare professionals have taken to the streets, banks and corporate headquarters armed with stethoscopes, glue and buckets of (fake) blood for protests, die ins and glue ons. Civil disobedience risking and sometimes deliberately seeking arrest.

A criminal record has traditionally been a barrier to medical practice, certainly keeping individual in question on a tight leash.

What about when the cause is a deep conviction that something is wrong?

That the online petitions aren't working, the comment pieces in the paper aren't falling on deaf ears, that the political process is more interested in mid-terms than mid-century; that we are sleep walking into disaster and the only thing left is to disobey.

Perhaps this shouldn't all that surprising, given climate scientists express the same fear.

An IPCC lead author recently published an article entitled "The Tragedy of Climate change science" in which he calls for a moratorium on climate change research, *"until governments are willing to fulfil their responsibilities in good faith"*. The tragedy being *"gaslighted into thinking the political failure to act is our fault…"*; it is the trap of being compelled to *"provide ever more evidence when the phenomena are well understood and the science widely accepted."*

A scientist calling for a halt to their own research?! (For the academics in the audience, if the evidence hasn't stirred you into action, perhaps this will!)

However, this scientist is not alone. One of the world's leading scientific journals, *Nature,* recently did a survey of the 233 living IPCC authors.

Nearly all were sceptical that current governmental action will seriously slow the pace of global warming. 8 in 10 believed they will see catastrophic climate change during their lifetime. And 6 in 10 hedged on 3 degrees warming by the end of the century.

The baton has been passed onto today's young.

Responsibility for fixing climate change without the power to actually do so. The financial burden from financing the net zero transformation without bearing the debt. The emotional burden of an uncertain future with no end in sight. And the political burden of deteriorating global institutions at the time they are needed most.

Thankfully that are some causes for optimism, not least, the strides being taken here in the Norwegian health sector. The health sector is stirring and commitments to decarbonisation, universalism and justice could be an important anchor in the storm ahead.

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A few months ago I had the pleasure of being woken up – early as I remember – by my partner, to the sound of Emily (my discussant today) on NRK Nyhetsmorgen. She was talking about the launch of the *Grønt Helsevesen* report which we'll soon discuss. A huge milestone for a project run on a shoe-string budget from the Centre of Climate and Energy Transformation at the University of Bergen to explore how to reduce carbon emissions from the Norwegian health sector. A couple of months on, Norway has signed up to the World Health Organisation Health Programme, committing to a net-zero health service, and every week more countries are following suit.

The question of sacrifice need not be in bloodshed and lives lost. A war footing is not defined by death but reconfiguration to achieve greater efficiency, enhance preparedness and harness the power of the collective.

To eradicate the scourge of poverty while pursuing net zero emissions we must think not only about progress, but possibility too.

The pathway to net zero does not mean we need to sacrifice health, but addressing climate change on the scale it presents means we may have to wave goodbye to healthcare as *we* know it.

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