Guest Editorial

The Physician and 'Climate Change'

Jane M. Orient, M.D.

A "climate emergency" has been declared, echoed by Democratic Presidential aspirants and by thousands of street protesters worldwide. Pressure groups demand radical change in all areas of life, including medical ethics, with no time for reflection or evidence-gathering.

According to the first of the AAPS Principles of Medical Ethics, "The physician's first professional obligation is to his patient, then to his profession. His ethical obligation to his community is the same as that of any other citizen." The AAPS motto *"omnia pro aegroto"* means "everything for the patient."

In recent decades, organized medicine, notably the American Medical Association and the American College of Physicians, has introduced a fundamental transformation. Individual patient welfare is subordinate to a perceived collective benefit. The AMA states that there are multiple stakeholders, whose interests must be balanced.[1] Various groups seek to divert physicians' energy and capitalize on their trusted status to promote a political agenda.

In the current widely promoted extreme view, "our ailing planet" is supposed to be our first priority. In an article in the *New England Journal of Medicine*, Dunk et al. write:

> We believe that the current imperative for climate action requires physicians to mobilize politically as they have before, again becoming fierce advocates for major social and economic change. A truly ethical relationship with the planet that we inhabit so precariously, and with the generations who will follow, demands nothing less.[2]

In 1990, Physicians for Social Responsibility members Michael McCally, M.D., Ph.D., and Christine Cassell, M.D., wrote in the *Annals of Internal Medicine* that "global environmental change," including, "potentially, global warming," which is "produced by the growing numbers and activities of human beings," threatens the "habitability of the planet and the health of its inhabitants." Thus it is socially responsible for physicians to use their expertise about the environment to try to prevent such change.[3] Christine Cassell was formerly president and CEO of the American Board of Internal Medicine and the ABIM Foundation, and then president and CEO of the National Quality Forum, which is in charge of setting quality standards for every hospital in the United States.

The Medical Society Consortium on Climate and Health offered an educational program on the "Health Impact of Climate Change—Preparing your Communities and Practices" at the AMA's 2019 interim meeting. The American Public Health Association joined with the Lancet Countdown in November 2019 to celebrate the release of a list of policy recommendations that "aim to protect human health from the climate crisis."[4]

The medical sector accounts for nearly one-tenth of U.S. greenhouse gas emissions and reportedly would rank seventh in the quantity of such emissions internationally if it were its own country.[5] Thus, physicians need to "do something." Recommended actions include fostering climate action in medical schools, incorporating advocacy skills in the medical-school curriculum, and supporting divestment from the "fossil-fuel" industry.[5]

Internationally acclaimed Gundersen Health System in La Crosse, Wisconsin, claims to produce more energy than it consumes.[5] To achieve this, Gundersen has spent $40 million on such projects as two wind installations, energy-conservation measures, and a dairy digester. It trucks $800,000 worth of wood chips a year to one hospital, where they are dumped into a concrete pit holding 75 tons of wood to feed the wood-burning boiler.[6] Methane from the manure of 2,000 cows generates electricity.[7] In Manhattan or Dallas, the logistics would be far more difficult.

Doctors are urged to be aware of the environmental consequences of their actions. Should they plan anesthesia management based partly on the greenhouse potential of the anesthetic agent[8]? "Green" their office and educate their patients on how they can reduce their impact on the environment? The American College of Physicians offers a Climate Change Toolkit.[9] AMA delegates are told that they, as members of a trusted profession, have a "moral imperative" to inform their patients about climate change—with easily accessible materials in their waiting rooms if there is not enough time during individual visits. Doctors "need to think of their organizations not just as healers, but also as contributors to a looming catastrophe that only massive amounts of concerted action taken now can mitigate."[10]

Beyond "Evidence-Based" Policy

Evidence alone is not enough in this "emergency," write Dunk et al., to "compel action in a nonrational policy sphere." Physicians need to "engage, on behalf of public health, with the ugly realities of ward politics, to take off their white coats and wade into the fray in which actions are taken and decisions made."[2] These authors observe that it was "an act of well-informed imagination—and evocative writing—that galvanized physician action against nuclear weapons." Physicians need "a preparedness to base policy advice upon predictions and best guesses (as opposed to empirical data) and an ability to collaborate with unfamiliar disciplines (e.g., climatology and ecology)" [parenthetical statements in original]. Epidemiologists must "anticipate the future."[11]

Despite the exhortations for physicians to make changes in their lifestyle or medical practices, the UN International Panel on Climate Change (IPCC) admits that such actions will have no measurable impact on climate. A "radical overhaul of global economy and society"[12] and "massive public investment in decarbonizing all economic sectors, not just energy," and a "swift end to fossil fuels"[13] are demanded. The cost of transition to "renewable" energy alone is estimated to cost the US. $2.3 trillion per year.[13] The ultimate goal appears to be a global socialist, technocratic regime to control industry, agriculture, energy generation and use, diet, and virtually every aspect

of daily life. An early draft for a Global Green New Deal was released by the United Nations Environment Programme (UNEP) in 2009.[14]

What is the evidence for the efficacy and safety of such a regime? If (and only if) atmospheric CO_2 could be cut to pre-industrial levels, by curtailing emissions and removing and sequestering CO_2, computer models predict that global mean temperature could possibly be held to less than the dreaded increase of 1.5 °C above the "pre-industrial level." These models, however, have so far proved to be very poor at predicting temperature.[15]

It is impossible to replace the 80% of the world's energy now generated by coal, oil, and natural gas with wind or solar, given the requirements for land, minerals, concrete, and energy-intensive manufacture.[16] Could nuclear energy be developed rapidly enough? If not, the only way to achieve the "carbon-neutral" goal would be by drastic reduction in energy use—through poverty and/or drastic reduction in the human population. Physicians for Social Responsibility and most environmental groups have strongly opposed nuclear energy.

The evidence concerning the actual performance of renewables is not favorable. In Germany, after $500 billion in subsidies for renewables, 53.5% of electricity was still generated with fossil fuels. Nuclear contributed 11.8%; onshore wind, 14.3%, offshore wind, 3.0%; hydro, 2.6%; biomass, 7.0%; solar, 7.2%; and waste, 1%.[17] The wind industry is collapsing as subsidies expire and opposition mounts from wildlife and forest conservationists.[18] Electricity bills have soared, and about 300,000 German households a year have been disconnected from the grid because of unpaid bills.[19]

There is a strong positive correlation between energy consumption and life expectancy at birth, according to figures from the World Bank.[20] Energy poverty would have a strongly negative effect on human health, life-span, and well-being.

Carbon Dioxide as Climate Driver

Discovered by Antoine Lavoisier (1743-1794), the carbon cycle describes the movement of carbon through the various reservoirs on earth.

It is estimated that the earth's crust or lithosphere contains 66-100 million gigatons of carbon (1 gigaton = 1 million metric tons), of which only about 4,000 Gt C is in "fossil fuels"—coal, oil, and natural gas.[21] The name implies that these are derived from primordial forests through a process that seems to be no longer operative for some reason, making them nonrenewable. That idea has been challenged, especially for "abiogenic oil."[22] The combustion of such fuels is the only way for carbon sequestered in the lithosphere to enter the carbon cycle.[21]

The atmosphere contains about 780 Gt C; the surface ocean, about 1,000 Gt C; vegetation, soils, and detritus, about 2,000 Gt C; and the intermediate and deep ocean, about 38,000 Gt C as CO_2 or CO_2 hydration products. Each year, the atmosphere and the surface ocean exchange about 90 Gt C.[23] Human activity adds about 6.1 Gt C to the atmosphere each year. The ocean absorbs about 2.5 Gt C more than it gives off to the atmosphere. That extra amount of carbon is utilized by marine biota and eventually gets incorporated into deep sea deposits and sediments.[21]

Over geologic time, atmospheric concentrations of CO_2 have reportedly varied widely, with some estimates 20-fold higher than the present level of around 400 ppm, and a low of 200 ppm.[23] According to one estimate, one hundred million billion tons of carbon have been taken up by coccolithophores (phytoplankton), shellfish, corals and foraminifera (zooplankton) and incorporated into calcium carbonate plates, scales, or shells. Over eons, the level of atmospheric CO_2 has fallen from about 2,500 ppm to the current level. As plants die at around 150 ppm, it can be argued that human use of carbon-based fuels is saving the biosphere from CO_2 starvation.[24] But is this use dooming the planet to a climate catastrophe?

There are numerous natural factors that affect climate, which has always been changing: the sun, ocean cycles (the Pacific Decadal Oscillation or PDO and the Atlantic Multi-decadal Oscillation or AMO), and stochastic events such as volcanic eruptions.[25] The IPCC models, however, consider only atmospheric CO_2—which happens to be the only factor over which humans have some control.

Joe Bastardi asks, how can the increase of only one molecule of CO_2 in 10,000 molecules of air over 100 years have an effect that outweighs the "Grand Slam of Climate" (the very design of the system)?[25] Note that CO_2 is a minor greenhouse gas; water vapor is by far the most important one.

If the earth is "ailing" owing to a "climate emergency," and CO_2 is the cause, what is the pathogenetic mechanism?

Like other "greenhouse gases," including water vapor, methane, and refrigerants such as freon, CO_2 absorbs energy in a narrow band in the infrared region. Al Gore and other advocates portray these gases to schoolchildren as a blanket enveloping the earth that will allow energy in but then trap it. In the most dramatic scene in his 2006 movie *An Inconvenient Truth*, Al Gore displays a graph of how global temperature closely tracks atmospheric CO_2 concentration. At the end, as humans are allegedly adding "unprecedented" levels of CO_2 to the atmosphere at a rate not previously seen, the temperature will soar—as Al Gore rides up on something like a forklift, the "elevator version" of the global-warming "hockey stick."

I found it difficult to see, looking at his graphs, which came first: the change in the CO_2 level or in the temperature. But from the underlying data, obtained from the study of ice cores, it is clear that the CO_2 level increase lags the temperature increase, and therefore could not have caused it. Recall that CO_2 solubility in sea water decreases as the temperature rises. In 1957, Revelle and Seuss estimated that temperature-caused out-gassing of ocean CO_2 would increase atmospheric CO_2 by about 7% per °C temperature rise. The reported change during the seven interglacials of the 650,000-year ice core record is about 5% per °C, which agrees with the out-gassing calculation. Between 1900 and 2006, atmospheric CO_2 increased 30% because of the addition of human-caused emissions. If CO_2 had been responsible for temperature rise, the ice-core record predicts an increase of about 6 °C per 30% rise in CO_2. In fact, the temperature rose only 0.1 °C–0.5 °C between 1900 and 2006.[23]

The physical mechanism for the greenhouse effect is radiative energy input exceeding radiative output. Svante Arrhenius, who has been celebrated as the "father of climate change,"[26] found a quantitative link between changes in atmospheric CO_2 and changes in climate.[27] In 1896, he argued that changes in CO_2 could have caused the ice ages, by altering the rate at which the earth cooled to space. Knut Ångström disagreed, arguing that his experiments showed that CO_2 was not a major driver of air temperatures.

CO_2 is indeed an infrared-active gas, as are water and other "greenhouse gases." However, Connolly and Connolly point

out that IPCC models ignore Einstein's 1919 observation that if a gas is in thermodynamic equilibrium, the rate of infrared absorption is equal to the rate of emission—the gas does not store the energy. The Connollys' data show that the gases are in thermodynamic equilibrium. Their weather balloons "have shown quite categorically that there is no greenhouse effect."[28,at 52:44 minutes]

Radiation accounts for only 0.29 watts/m² (0.01%) of the energy transfer within the atmosphere.[28] Climate catastrophe predictions must assume a large positive feedback from a temperature increase of any cause. Paleoclimate data showing higher CO_2 levels or higher temperatures definitively refute the runaway greenhouse concept. The Roman Warm Period and the Medieval Warm Period seen on early IPCC graphs are thus quite inconvenient.

These periods were made to disappear, as was the Little Ice Age, by data manipulations exposed in the "Climategate" emails obtained from the University of East Anglia. The "hockey stick" pattern of unprecedented recent warming is an artifact that can be generated from cherry-picked data from Siberian pine YAD061, the "most influential tree in history," or by feeding random data into the computer model used by Michael E. Mann, a climate scientist at Pennsylvania State University and a prominent figure in the scandal.[29]

It is now the 10th anniversary of Climategate. James Delingpole writes that the retrieved documents showed scientists "contriving to destroy inconvenient data in order to evade FOI [Freedom of Information] inquiries; attempting to shut down scientific journals which published studies unhelpful to their cause; viciously bullying dissenters; even trying to rewrite history." Yet, "by some bizarre inversion of logic, the less and less credible the evidence for the great global warming scare, the bigger and noisier and more powerful the Climate Industrial Complex has grown."[30]

Judith Curry, whose academic career was derailed in the wake of Climategate because she expressed views uncongenial to the climate establishment, reflects on the continuing repercussions. These include putting "a halo around Michael Mann's head over his 'victim' status," turning "politically correct and 'woke' universities" into "hostile places for climate scientists that are not sufficiently 'politically correct'"; and damage to the integrity of professional societies that have published policy statements advocating emissions reductions and that marginalize research that is not consistent with the party line.[31]

The Fake Consensus

Science, of course, is not consensus based. But the assertion that "97% of climate scientists" agree with the apocalyptic climate scenarios is highly effective in convincing the public and politicians. This conclusion by Cook et al.[32] was based on reviewing abstracts of 11,944 papers on climate change and concluding that 97.1% of those expressing an opinion supported the consensus view—after they excluded the 67% that expressed no opinion. According to Christopher Monckton, that paper actually shows only 0.3% agreement with the hypothesis that human activity is very likely causing most of the current global warming. None were shown to agree with the idea of catastrophic human-caused warming.[33]

Great press fanfare, including in the *Washington Post*,[34] greeted the announcement that 11,000 scientists from 153 countries signed on by internet to an article in *BioScience* entitled "World Scientists Warning of a Climate Emergency."[35] The article provided no evidence for a human-caused climate emergency, but rather accepted it as a given. The "suite of graphical vital signs of climate change" shows that per-capita meat consumption has increased by 11% in 10 years, world GDP by 80% in 10 years, and passenger air travel by 64% in 10 years—all signs of increasing prosperity.

"To secure a sustainable future, we must change how we live, in ways that improve the vital signs summarized by our graphs," the article concludes. "Economic and population growth are among the most important drivers of increases in CO_2 emissions from fossil fuel combustion." It noted that "still increasing by roughly 80 million people per year, or more than 200,000 per day…, the world population must be stabilized—and, ideally, gradually reduced…."[35] "Improvement," as defined by these authors, means fewer human beings and less prosperity.

Ezra Levant reviewed the Canadian signatories[36]—which are hardly a group of accomplished scientists. This can no longer be done at the time of this writing because the list is unavailable[37] while "invalid" signatures, likely including "Mouse, Mickey," are removed.

The longest list of scientist signatories to a petition related to climate change is the Oregon Petition (www.PetitionProject.org), which reads:

> We urge the United States government to reject the global warming agreement that was written in Kyoto, Japan in December, 1997, and any similar proposals. The proposed limits on greenhouse gases would harm the environment, hinder the advance of science and technology, and damage the health and welfare of mankind.
>
> There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth.

This petition was not posted on the internet to be signed by clicking on a link. It was sent, together with an extensively referenced review article, by postal mail to known scientists from lists such as *American Men and Women of Science*. It was signed by 31,487 American scientists, including 9,029 with a Ph.D. degree. These included two prominent scientists who had raised the issue of possible climatic effects of increased atmospheric CO_2, investigated it, and concluded that it was not a serious problem warranting drastic intervention: the late Edward Teller and the late William Nierenberg.

Since even one dissenter is a problem for climate alarmists, immediate action was taken to discredit the petition. An activist group, probably Ozone Action, planted a fraudulent signature, then "discovered" it—that of a popular singer Geri Halliwell, known by her stage name Ginger Spice. The mistake of accepting a signature sent by FAX was not repeated, and security measures were undertaken to assure validity of all signatures and remove duplicates. But media smears continue to circulate.

The "cancel culture," social media de-platforming, censorship of dissidents ("climate deniers") from the mainstream press and prestigious journals, and serious threats to the livelihoods of any who are not on the "correct" side of this issue keep many Americans from learning that there is even a debate.

Instead of rational discussion, the issue is dominated by a mass youth movement, at the moment starring the Swedish activist, 16-year-old Greta Thunberg, saying, "I want you to panic" and "How dare you!" Thanks to incessant indoctrination in government schools, she and her contemporaries apparently believe that their future has been stolen from them by the older generation and the capitalist system that has enabled them to live comfortably and in freedom.

The power of youth movements has been harnessed by totalitarian campaigns before. Concerning Communist infiltration in the U.S. during the 1930s, Eugene Lyons writes:

> Because of immaturity and youthful eagerness, [youth] "follow the leader" more blindly than any other age group, and are perfect raw stuff for demagogic molding. Not one of them in ten thousand would be trusted to make policies for his community. Yet the ten thousand together, as Youth with a capital Y, influence policies, and command attention beyond their numbers and without reference to their inexperience and peculiar psychological influences….
>
> I watched both Italian Fascism and German Nazism at close range in their formative stages. It is not generally appreciated to what a large extent they were both Youth movements.[38]

Members of Physicians for Social Responsibility are marching with youth Climate Strike protesters. These physicians write that they are "pleased to witness the important testimony of 16-year-old climate activist Greta Thunberg before Congress" as she "told lawmakers to listen to scientists and urged immediate action to respond to the climate crisis," and are disseminating photographs of her on social media.[39]

The Real Objective

If lowering atmospheric CO_2 would not "stabilize" the climate, even if it could be achieved, because CO_2 is not the climate driver, what is the point of the multi-trillion-dollar investments?

Climate scientist Richard Lindzen of the Massachusetts Institute of Technology states: "Controlling carbon is a bureaucrat's dream. If you control carbon, you control life."[40]

As Walter Williams points out, proponents of controlling greenhouse gases have revealed their true agenda. They themselves do not believe the narrative through which they are causing mass anxiety, depression, and even despair.[41]

Ottmar Edenhofer, lead author of the IPCC's fourth summary report released in 2007, speaking in 2010 advised: "One has to free oneself from the illusion that international climate policy is environmental policy. Instead, climate change policy is about how we redistribute de facto the world's wealth." UN climate chief Christiana Figueres said that the true aim of the UN's 2014 Paris climate conference was "to change the (capitalist) economic development model that has been reigning for at least 150 years, since the Industrial Revolution." Christine Stewart, Canada's former Minister of the Environment said: "No matter if the science is all phony, there are collateral environmental benefits.… Climate change (provides) the greatest chance to bring about justice and equality in the world." Tim Wirth, former U.S. Undersecretary of State for Global Affairs and the person most responsible for setting up the Kyoto Protocol said: "We've got to ride the global warming issue. Even if the theory of global warming is wrong, we will be doing the right thing in terms of economic policy and environmental policy."[42]

Lindzen wrote in 2003 that "the scientific community is clearly becoming less ambiguous in separating views on warming from totally unreasonable fears for both the planet and mankind." But he observed that "environmental advocates are responding by making increasingly extreme claims," and his hope that "some path will emerge that will end the present irrational obsession with climate"[43] has not yet been realized.

Scientific as well as medical ethics is challenged. Lindzen stated that he didn't think any field could survive the degree of corruption that climate science has experienced without at least losing its self-respect. He believes progress may have been set back a few generations because instead of trying to figure out how the earth behaves the field was coopted into a situation where it was supposed to support a paradigm that the government or the environmental movement wanted.[44]

Conclusions

There is an existential threat related to climate, as Climate Strike activists claim, but it comes from the radical political agenda being promoted under cover of "saving the planet."

The evidence refutes the claim that human emissions of carbon dioxide can catastrophically disrupt the earth's climate. Continuing to spend trillions of dollars to "fight climate change" will have no effect on the climate and cannot meet human energy needs with "renewables."

The existential threat is to our freedom, our prosperity, our capacity to provide medical care, and the integrity of our science and our profession. Physicians need to evaluate evidence independently and shun groupthink. They must not sacrifice their patients' welfare to serve an agenda.

Jane M. Orient, M.D., practices internal medicine in Tucson, Ariz., and serves as executive director of AAPS and managing editor of the *Journal of American Physicians and Surgeons*. Contact: jane@aapsonline.org.

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