

CLIMATE TALK

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In early July the weather was finally starting to feel like summer. The humidity was decreasing, the yard was finally dry, and the sunsets were even more amazing than usual. The only thing that felt odd was the strange haze that seemed to hang in the air. Meanwhile, the hospital and the clinics were seeing an unusual amount of respiratory complaints. Those with asthma or emphysema seemed to be having breathing problems at rates usually associated with a viral epidemic. It all tied together when I watched the news. Huge forest fires in the Canadian mountains were sending a plume of smoke our direction.

Later in the summer our family vacationed in the Pacific Northwest. The mountains were beautiful but were obscured by a layer of smoke. The papers reported that the “California drought” now included the entire West Coast. Even Washington's Olympic rainforest was burning. Fire fighters were being flown in from as far away as Australia. As the smoke rolled into Portland, the emergency rooms prepared for an influx of respiratory complaints. Public health officials in Missoula, Montana, advised parents to limit the time children were allowed to play outside. Why were the fires so unusually big? A California fire expert explained that this drought was not caused by climate change, but that climate change was definitely making it worse. Indeed, the Union of Concerned Scientists has reviewed the data and confirmed that climate change has caused wildfires to increase in severity and frequency.

As a physician, all of this stimulated me to think about the health effects of climate change. Indeed, a review from the esteemed University College London Institute for Global Health has described climate change as “the biggest global health risk of the 21st century.” The World Health Organization predicted last year that in 2030 climate change will lead to 48,000 additional deaths due to diarrhea, 60,000 from malaria, and 95,000 from childhood malnutrition. The effects of climate change are expected to disproportionately affect the poor. In a quote from one symposium, “The rich will find their world to be more expensive, inconvenient, uncomfortable, disrupted and colorless; in general, more unpleasant and unpredictable, perhaps greatly so. The poor will die.”

First, climate change will change disease and mortality. It is expected to increase deaths from lung and heart disease due to increased heat and pollution. This is already being observed as heat waves become more frequent and more severe. Meanwhile, increasing temperatures will change infectious disease epidemics. For example, malaria is predicted to move in to areas that have been protected by cool climates.

As climate changes in the world's agricultural zones, it is predicted that losers will outnumber winners. Large portions of the world's most productive farmland will be much drier and much less productive. Production of staples, like corn and rice, could be reduced by 20% to 40%! This is predicted to increase food insecurity and will create spiraling food costs. Malnutrition will cause even more susceptibility to all infectious diseases. Furthermore, as sea levels rise and severe weather events increase in frequency, we can expect more coastal land lost to salt water contamination and more crops lost to storm damage.

The many areas of our world that already have inadequate fresh water supplies will see even more

drinking water shortages. Not only will droughts cause those with marginal water resources to face more periods of serious shortages, but it is also predicted that severe storms are likely to increase in frequency and severity, which will increase the risk of drinking water contamination. With nearly 20% of the world dependent on drinking water from glacial water supplies, the melting of the world's glaciers will put the drinking water supplies of those populations at risk. This shortage is an especially large concern in the immense cities of India and Pakistan. Locally, it is my understanding that the impact of climate change on the level of Lake Superior remains unclear. I worry that a decline in the level of the lake could compromise the drinking water of Ashland and other lake communities.

Finally, the agricultural change brought by climate change is expected to increase the human migration that is already happening across the world. The large majority of these migrants will be packed into desperately poor areas of the world's megacities where they will be vulnerable to health impacts effects from contaminated water, inadequate sewage disposal, unclean food, and other unhealthy conditions resulting from climate change.

The worst of these effects will impact citizens of the desperately poor countries of our world.

Why should we care?

First, climate change will jeopardize the health of many of our neighbors struggling to make ends meet. I know people in our community who are already unable to afford the healthy diet that I recommend. That situation will worsen if unchecked climate change results in skyrocketing food prices.

Second, as human beings it is our ethical responsibility to care about our fellow humans who live on the other side of the planet with different shades of skin from our own. As the English clergyman and poet John Donne so eloquently put it:

“Any man's death diminishes me,
Because I am involved in mankind,
And therefore never send to know for whom the bell tolls;
It tolls for thee. “

Certainly the use of fossil fuels has provided tremendous opportunities. This includes economic growth that has produced amazing public health benefits. But now it is our responsibility as a society to recognize that climate changes caused by continued unchecked use of fossil fuels runs the very real risk of reversing those health benefits that have been so hard earned.

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