Climate Change Poses Serious Risks to U.S. Health Care System

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During July 1995, Chicago was gripped by a heat wave that still ranks as one of the deadliest in U.S. history. Estimates vary, but more than 700 people, many of them elderly and isolated, may have died as a result of the heat, which soared as high as 106 degrees. The federal government dispatched refrigerator trucks to store the deceased, hospitals shut down emergency rooms (ERs) for lack of space, roads buckled from the heat, and the Chicago Fire Department had to hose down children who were overcome by dehydration.

Now, imagine if we experienced multiple Chicago heat waves every summer, in cities all across the country. That is the direction we are headed unless we change course and take strong, decisive action to curb climate change.

We have precious little time to do so. According to a new study commissioned by the Risky Business Project, to which we served as advisers, if we continue business as usual, in only 35 years the average American will experience an additional 12 to 35 days every year during which temperatures will reach 95 degrees. By that time, the average summer will be hotter in Montana than it is now in New Mexico. By the end of the century, Oregon, Washington, and Idaho could well have more days each year above 95 degrees than currently occur in Texas.

Different regions will experience different impacts. New England, the upper Midwest, the Rocky Mountains, and the Pacific Northwest will see declining mortality rates due to warmer winters. But the Southwest, Southeast, and lower Midwest could see sharply higher mortality rates from extreme temperatures. The elderly and infirm will be especially vulnerable.

Overall, by century’s end, the combined results of the decline of extreme cold and rise in extreme heat due to climate change is likely to kill approximately 12,000 to 65,000 additional people every year, based on 2012’s population. At the high end of the estimate, in less than 10 years the casualty figure would roughly equal all U.S. battle deaths since our country’s founding.

One often-ignored aspect of climate change is the potential for extreme heat days to overwhelm our existing hospital facilities. During the Chicago heat wave, hospitals were suddenly faced with an additional 3,300 ER admissions. Numerous hospitals simply closed their ER doors, unable to handle additional patients. We have one of the world’s finest emergency response
systems, but in its current configuration it cannot be expected to manage the additional morbidity and mortality from dramatically higher heat.

The same can be said for another climate impact, flooding due to “storm surge” from a combination of higher sea levels and frequent hurricanes. During Hurricane Sandy, several New York City hospitals were forced to evacuate due to flooding and power issues, thus putting burdens on other city hospitals and emergency response facilities. The total cost for the New York hospital and health care system of dealing with the aftermath of Sandy was more than $3 billion.

The most sobering concern is something called wet-bulb heat, which reflects the combined effect of temperature and humidity. A person can’t survive a wet-bulb temperature much more than 95 degrees. We’ve never seen a wet-bulb temperature in the United States higher than 92 degrees. But that may change. By mid-century, a quarter of the U.S. population will likely live in areas where wet-bulb temperatures exceed 92 degrees at least one day each year. By century’s end, half of our population could be exposed to a full week of 92 degree wet-bulb days, and a third of the population will experience at least one dangerous 95 degree wet-bulb day each year.

Emergency services across the United States, in both coastal and high-heat regions, must become more resilient just to meet the challenges that will occur as a result of the climate change that is already baked into our atmosphere. It’s an open question whether they can be made resilient enough to deal with the potential impacts if climate change is left unchecked, especially since many emergency rooms already have difficulty providing care during unusually high demand.

That’s why we believe that in addition to preparing for climate change, the United States also needs to take strong, decisive measures to stop it.

The U.S. health care and public health systems have repeatedly taken steps to safeguard human health, from installing public sanitation and implementing mass vaccine programs to protecting our air and water from disease. Now it is time for the health care sector to step up to the rapidly emerging challenge of climate change. The health of our country depends on it.

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References

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