

AT ISSUE: CORONAVIRUS

Doctors point to parallels

BY MARK CANNON and
ELIZABETH DEL BUONO

As the CherryT ball dropped in downtown Traverse City, nobody suspected that an invisible virus spreading through far-away Wuhan, China would close schools, stores, restaurants and public life right here at home only a few months later.

Seniors in community residences would have good reason to fear for their lives, while college and high school graduation ceremonies would be canceled, weddings postponed and unemployment would skyrocket to levels not seen since the Great Depression.

The coronavirus has been a shock to our system. This disruption of normal activities gives us pause to reflect on the intersection of human wellness and environmental health.

We in Grand Traverse County have seen relatively few deaths. Munson Healthcare was proactive, using evidence-based science to educate its staff and the community with regular, transparent and comprehensive webinars and regularly updated websites. This leadership, coupled with Gov. Whitmer's call to physically distance and restrict all but essential services,

helped our community to rally together and, at least for now, "flatten the curve."

Unfortunately, the COVID-19 pandemic is not the only public health crisis threatening us today. Climate impacts resulting from our fossil fuel-based energy and transportation systems have the potential to dwarf the impacts of COVID-19, both in terms of human health and the economy. The World Health Organization (1) describes climate change as the "greatest public health threat of the 21st century."

As medical professionals, we feel there is much to learn from the pandemic. Just as public health experts warned us for years of the potential of a pandemic, so have scientists warned us of the risks of climate change. Most major medical societies (2) in the U.S., including the American Medical Association, call for urgent action (3) to reduce emissions and transition to clean forms of energy.

Even now, we are seeing the health impacts of climate change in Traverse



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City. For example, asthma and allergy seasons are longer and more intense, while tick and mosquito

seasons are also prolonged with a subsequent increase in exposure to the diseases they carry. It is also becoming increasingly difficult to grow the healthy, tasty foods that define our region, including cherries, apples, grapes and hops.

If COVID-19 has taught us anything, it is that we need to heed the warnings of experts and act proactively and collectively. Early, effective, evidence-based solutions are necessary to minimize the worst impacts of climate change. Scientists are telling us that we are running out of time to reduce emissions and avoid irreversible tipping points that have the potential to threaten life far into the future.

As we move forward to address the economic impacts resulting from the pandemic, we should also consider climate mitigation and effective legislation that reduces emissions and drives innovation towards a clean

sustainable energy future.

It is not too late. A more robust and resilient future is possible if we heed the lessons presented to us by the pandemic today.

References:

- (1) World Health Organization Calls for Urgent Action to Protect Health from Climate Change: <https://www.who.int/globalchange/global-campaign/cop21/en/>
- (2) Medical Society Consortium on Climate and Health: Member Societies: <https://www.who.int/globalchange/global-campaign/cop21/en/>
- (3) U.S. Call to Action on Climate, Health & Equity: <https://climatehealthaction.org/cta/climate-health-equity-policy/>

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AT ISSUE: CLIMATE CHANGE

Rebuild better after this crisis

BY JULIE QUINN

Climate change is a public health crisis. COVID-19, and now widespread flooding, has demonstrated the need to acknowledge scientific evidence in the face of potential crises and prepare accordingly.

As the floodwaters in the Midland and in the Traverse City area ease this week, we are reminded of the effects of changing weather patterns and record rainfall on public health and safety.

According to the U.S. Global Change Research Program, heavy precipitation events, fueled by more moisture in a warming atmosphere, have increased across the upper Midwest almost 40 percent in recent decades. There were signs of impending infrastructure failure for years in the Midland area; and known record rainfall. For the over 10,000 people in the Midland area who had to evacuate their homes in the midst of the COVID-19 pandemic, it must have felt particularly frighten-



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ing. Added to the anxiety of inhabitants of the area, a 13-year ongoing superfund cleanup was occurring upriver.

Not only will the costs to remediate these floods be many times what prevention would have been, it could have lasting effects on public health as the groundwater will be affected by sewage seepage, agricultural runoff and, potentially, in Midland's case, toxins from the nearby superfund site and Dow Chemical overflow containment ponds. Affected and swamped farmland will not be productive in the near future and that loss contributes to a strain in food production and delivery.

The Midland situation is a stark example of the need for preparedness and action in the face of evidence. Increasingly severe weather patterns, including record rainfall

in Michigan, should have been an alarm bell that induced action, just as climate change in general should induce us to act and prepare.

"Most of our infrastructure — the roads, dams, bridges, hospitals, airports, harbors, power plants, pipelines, businesses, storm sewers and homes — was built for a planet that no longer exists." — Peter Sinclair, *Washington Post*

Smart systems, preparedness and investing in infrastructure would save lives whether a pandemic occurs or climate-related events. Our most basic needs — water, clean air and food — are threatened by thoughtless growth, antiquated policy and our reliance on fossil fuels.

More people than ever are convinced that climate change is real as they see the effects of climate change encroaching on their well-being and livelihoods and they are calling on their governments to take action.

On May 26 health care professionals with the Medical Society Con-

sortium on Climate and Health signed a letter (healthyrecovery.net) to the leaders of the G20 countries with this message: The enormous investments our governments will make over the coming months in key sectors like health care, transport, energy and agriculture must have health protection and promotion embedded at their core.

Rep. Bergman, Sens. Peters and Stabenow and Gov. Whitmer: let's build *better* coming out of this pandemic; enabling more wind and solar power, sustainable agriculture, putting a price on carbon!

We can do this. We must do this — because our health and our economy depend on it.

About the author: Julie Quinn, of Leelanau County, is a member of Citizens Climate Lobby, Michigan Clinicians for Climate Action and the Sierra Club. She practiced obstetrics and gynecology until 1993 and then managed the Northwood Ob/Gyn medical practice, where she is a consultant.

AT ISSUE: MEDICINE

Time to reinvent health care system

BY DEBORAH CROWE
and DAVID WRIGHT

Water is the heart and soul of most Michiganders. But too much of a good thing can become a disaster as we witnessed recently both here in Traverse City and in Midland. In a matter of hours on May 28, unprecedented rains flooded downtown Traverse City streets, many of our favorite shops and restaurants in the Commons and many residential basements. Beachgoers were once again warned of contamination as stormwater and sewage systems were overwhelmed.

Possibly most startling of all was the flooding that occurred in parts of the lower levels of Munson Medical Center. Although the deluge on water-laden soil and swollen streams was too much, Munson's proactive Kid's Creek restoration and strategic landscaping no doubt diminished the damage.

Unfortunately, extreme weather events like this storm are projected to become more common as the atmosphere warms. It is sobering to think of an institution that is an anchor in our community being compromised during a crisis. Occurring in the midst of the pandemic, this flooding is an example of how climate

change can act as a threat multiplier. It is critical that hospital systems prepare for more frequent extreme weather

events in order to provide care during a crisis.

As the climate warms, hospitals are increasingly directly and indirectly impacted by extreme weather. During hurricane Harvey, one University of Texas hospital literally became an island in the floodwaters, accessible only by boat or helicopter (1).

During the 2019 Kincaide wildfires, hospitals had to be evacuated. Imagine your hospitalized loved one quickly loaded into an ambulance or helicopter to escape the flames. In addition, regional power had to be shut off to prevent further electrical sparks. Energy independence would allow hospitals to remain functional during such times of crisis.

Paradoxically, healthcare is a significant source of carbon pollution, the same pollution that is contributing to warming conditions and more frequent flooding in our area. It also exacerbates some health condi-



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tions leading to tens of thousands of premature deaths and billions of healthcare dollars spent each year. It is estimated

that if global healthcare were its own country, it would be the fifth biggest emitter of greenhouse gases (2). It is inspiring to know that Gundersen Health System in Wisconsin (3) has achieved net zero carbon emissions while Munson has implemented numerous green measures including the LEED-certified design of the Cowell Family Cancer Center.

Healthcare is built on the premise of "first do no harm." With our wealth of knowledge about the adverse impacts of pollution on health and the environment, the health community must do everything it can to become more resilient to climate impact and reduce its carbon footprint.

Hopefully soon we will emerge from the pandemic that has overwhelmed our nation's hospitals. Now is the time to reimagine healthcare in a way that would minimize future impacts of climate change. Let's not miss this opportunity to create

a more energy independent, low carbon, resilient healthcare system with hospitals that are not only "safe havens in a storm" but first and foremost "do no harm."

Footnotes:

1) <https://www.tha.org/Publications/Texas-Hospitals-magazine/Texas-Hospitals-July-Aug-2018/Hospitals-and-the-Unexpected-Impacts-of-Hurricane-Harvey>

2) https://noharm-global.org/sites/default/files/documents-files/5961/HealthCaresClimateFootprint_092319.pdf

3) <https://www.healthcaredesignmagazine.com/projects/acute-care/nailling-net-zero-gundersen-health-system/>

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AT ISSUE: NURSING

The 'social determinants of health'

BY ANNELLE KASPOR
and MARYLEE PAKIESER

The tragic consequences of the COVID-19 pandemic have given rise and recognition to the critical importance of the nursing profession. In fact, a 2019 Gallup poll revealed that nursing is the MOST trusted profession.

Unfortunately, there are many conditions to which people are born that result in unhealthy living conditions and impede access to preventative health care. These are defined as the "social determinants of health" and nurses are advocating to protect those who are unfairly disadvantaged.

These same nurses advocate and educate to increase awareness that climate change is a public health crisis. Only 25 percent of Americans recognize its effects on human health. Air pollution and carbon based greenhouse gasses are caused by electricity production, industrial and agricultural processes and transportation. Warming temperatures increase the levels of pollutants in the air and exacerbate respiratory diseases such as asthma and COPD; heart disease, stroke and kidney disease — among others. Vector-borne diseases — Zika, Lyme Disease and tropi-



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cal diseases — are on the rise. Extreme rainfall and floods create unsafe water supplies, injuries and death, plus food and water-borne illnesses. Finally, stress-related mental health issues are exacerbated by the trauma of such events.

Most health inequities are related to conditions defined by where people are born, grow, live, work and age.

The pandemic and the climate crisis highlight these inequities. Even here in Traverse City, the very young and old, pregnant women, and the homeless are more vulnerable.

Urban areas like Detroit and Flint are more at risk of illness related to air pollution, extreme heat, and the coronavirus.

Not only are these people often "essential workers" who live in more crowded conditions thereby increasing their risk of exposure to the virus, they are also less likely to survive after

becoming infected. A recent study from Harvard confirmed that exposure to higher levels of air pollution is correlated with an increased risk of death from COVID 19.

Asthma is an example of a chronic condition that is likely to worsen as temperatures warm and one in which social inequality impacts the outcome.

People living in urban areas close to heavy industry are frequently exposed to high concentrations of both outdoor and indoor pollutants, concentrations which increase when temperatures rise.

Even when patients are on medication, these environmental exposures frequently lead to flares requiring emergency room visits, hospitalizations, and even deaths.

Chronic conditions such as asthma need to be monitored on a regular basis to prevent worsening of lung function, yet these same people often face barriers to adequate health care such as lack of insurance, transportation or health care providers.

As a nation we need to look honestly at systemic conditions that disadvantage certain populations. It is the nurse, who has tirelessly served these populations, who

is now leading the way to a more healthy and equitable future for all. As Florence Nightingale said "I think one's feelings waste themselves in words, they ought all to be distilled into actions and into actions which bring results."

About the authors: Annelle Kaspor is graduate of Wayne State University and Tulane University School of Public Health and Tropical Medicine. After 40 years as a family nurse practitioner she is now semi-retired and works contractually for two healthcare agencies. She is a lifelong member of ANA and MICNP and is an active board member of the Children's Advocacy Center and Hickory Meadows Advisory Committee.

MaryLee Pakieser is a registered nurse with 48 years of clinical practice, the last 25 as a nurse practitioner. She is active in professional nursing associations (ANA, ANA-MI and Michigan Council of NPs) and recently completed a term on the ANA national board. She has been active with a variety of community issues, including serving on the Northern Lakes Community Mental Health board and now the Traverse Area District Library board.