Impacts of Climate Change on Health Care

Key Talking Points

[1] Natural disasters caused by climate change create disruptions in the healthcare system. When the global medical supply chain — which provides critical medical materials to local and national facilities — experiences climate-related disruptions, healthcare providers and facilities struggle to provide lifesaving and life-sustaining services.

When Puerto Rico was struck by debilitating hurricanes Irma and Maria in 2017, major industries, including drug manufacturers and surgical suppliers, were left unable to produce medical supplies, leaving the U.S. health care industry to look elsewhere while Puerto Rico still recovers from the damage.

Kaiser Permanente was forced to evacuate the same hospital twice in 2019 due to the imminent danger of wildfires in Santa Rosa, California. These incidents caused significant disruptions to the delivery of care—from risking patients well-being through emergency transportation; to an increased need for care after the fires passed through; to the destruction of healthcare provider’s homes in the area.

[2] Intensified global warming will create compounding health, social, and financial effects on a global scale.

As global warming intensifies, health, social, and financial effects will continue to compound—exacerbating a population health crisis at a global scale. According to Northwest Permanente, this effect will be felt particularly in low & middle-income countries/populations, and will disproportionately affect vulnerable groups within each country, including those experiencing poverty, children, women, the elderly and those with pre-existing medical conditions.¹

In 2017, Oregon released a Statewide Climate and Health Resilience Plan, which focuses on five local health departments (Benton, Crook, Jackson, Multnomah, and North Central Public Health). With funding from the CDC, these health departments are creating resilience plans to adapt to climate change, including addressing community-identified priorities ranging from providing water testing for domestic well users in drought-prone areas, to quantifying the health co-benefits of proposed transportation investments.² At North Central Public Health, local health officials were able to secure 50 well water tests for bacteria and nitrates, creating a better understanding of how environmental changes are impacting local water sources.³

¹ Confronting climate change: Northwest Permanente in the environment of the future
Colin Cave, MD; Medical Director for External Affairs, Government Relations and Community Health

² https://nca2018.globalchange.gov/chapter/24/

Air pollution — the deadliest form of pollution — cost the global economy $225 billion in lost labor income in 2013. According to Oregon Solutions, North Portland, a statewide distribution hub in Oregon, has the highest levels of diesel pollution in the state, at approximately 20 times higher than the health standard.

In 2018, 141 million people in the United States were exposed to unhealthy air, increasing by 7 million from 2017. Particulate air pollution from burning fossil fuels, wildfire smoke, diesel, and increasing ground-level ozone (a pollutant formed when heat and sunlight produce an excess of unhealthy compounds in the air) increases asthma prevalence and severity of respiratory diseases.

In Oregon, wildfires are causing increased air pollution across the state. Preventive measures, including forest thinning, are being taken to preserve forests and limit risk to wildfires in densely forested areas. Colorado-based Red Rock Biofuels is building a jet and diesel fuel refinement facility in Lakeview, OR, that converts woody biomass and agricultural waste into 15 million gallons of usable fuel per year. Red Rock has secured contracts with FedEx, Southwest Airlines and the military. The first refinement facility of its kind in the world because of its use of biomass, the Red Rock plant is intended as a blueprint for keeping forests healthy and resilient while advancing the use of clean fuels, and introducing over 600 jobs to the area.

This year alone, an estimated five million people are predicted to die worldwide from climate change. From air pollution, to food shortages, to the spread of diarrheal disease, climate change is creating an undeniable public health crisis, and insurance companies are footing the bill.

Costs will continue to increase for payers covering health conditions that will become more common with climate disruption and for hospitals and other health care facilities managing the consequences of extreme weather events. However, certain preventive actions can be taken to help reduce costs of air pollution-related diseases, increased temperature-related illness, and water and vector-borne diseases, by adapting to climate-related patient needs.

Coordinated Care Organizations (CCOs) in Oregon are providing flexible services to members who need extra support, and in certain cases, for climate related health reasons. In some cases, they cover the cost of air conditioning units for patients at risk of heat-related illnesses, ensuring

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6 American Lung Association, Key Findings, The State of the Air 2019 https://www.lung.org/our-initiatives/healthy-air/sota/key-findings/
9 Ibid.
patients can remain in their homes. This is a small investment that outweighs a potential cost to the healthcare system for patients needing to be hospitalized for heat-related illnesses as temperatures rise across the state.

[5] Health care systems are responsible for approximately 4% of the world’s greenhouse gas emissions.

A 2019 report by the Potsdam Institute for Climate Impact Research shows that in 2014, global health care emissions were 4% of the overall global CO2 emissions, which included a comprehensive look at emissions from the health care supply chain.

Kaiser Permanente has set an internal goal to be carbon neutral by 2020, and “carbon net positive” by 2025 by purchasing enough clean energy and carbon offsets to remove more greenhouse gases from the atmosphere than they emit. The solar system at Kaiser’s Richmond (CA) Medical Center is credited with reducing electric bills by about $140,000 a year. Between 2014 and 2017, Kaiser Permanente achieved a 23% reduction in greenhouse gas emissions associated with its use of anesthetic agents.

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11 https://nca2018.globalchange.gov/chapter/24/
13 Appleby, Julie, 2018.
14 https://about.kaiserpermanente.org/community-health/improving-community-conditions/environmental-stewardship/climate-action