Regional Climate and Health Monitoring Report

OPHA Annual Conference
October 12th, 2021
Overview

• Context
• Report Overview
• Process and Report Findings
• Looking Forward
Clackamas, Multnomah, and Washington Counties are the three most populous counties in Oregon (~1.8 million residents total).

43% of the state’s population lives in this region.
Regional Climate Change Impacts September 2020

A Line of Fire South of Portland and a Yearslong Recovery Ahead

Firefighters continued to battle blazes along the West Coast that have now charred nearly five million acres. At least 17 people are dead, with dozens still missing.

PORTLAND, Ore. — Portland and Vancouver residents are waking up to hazardous air quality levels Friday due to smoke in the air from nearby wildfires. In fact, as of 8:30 a.m., Portland had the worst air quality in the world among major cities, according to IQAir.

KATU Meteorologist Rhonda Shelby said the onshore flow of air that returned to the region is too weak to break the valley inversion holding the smoke in. The thick smoke is causing
Snow and ice blanket US north-west, leaving hundreds of thousands without power

- Travel disrupted in region and treacherous driving conditions
- Oregon governor Kate Brown declares state of emergency

Cars drive along Interstate 705 in Tacoma, Washington state, on Saturday. Photograph: Joshua Bessex/AP

Hundreds of thousands of people remained without power in the Pacific north-west after a winter storm blanketed the region with ice and snow and made travel treacherous.

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This the third vehicle in the last hour we’ve seen drive under the tree and power lines down in Milwaukie.
Regional Climate Change Impacts June 2021

Weather

Oregon death toll from historic heat waves rises to 107

Updated Jul 07, 1:49 PM. Posted Jul 06, 12:30 PM

It was the first time the Oregon Medical Examiner's Office has updated the statewide death toll since the long Independence Day weekend. The previous death toll was 94. During the historic heat wave, people made use of a cooling center at the Oregon Convention Center during Portland's unprecedented heat wave. People's lives were threatened and even lost due to high temperatures.
Report Overview

The Regional Climate and Health Monitoring report is a collection of baseline data for Clackamas, Multnomah, and Washington Counties on 12 health indicators influenced by climate change.

- **Vector-Borne Disease**
  - Lyme Disease
  - West Nile Virus

- **Extreme Heat**
  - Heat-related Emergency Department Visits
  - Heat-related Hospitalizations
  - Heat-related Deaths

- **Air Quality**
  - Asthma-like Emergency Department Visits
  - Allergic Disease Emergency Department Visits

- **Communicable Disease**
  - Salmonella
  - Campylobacterosis
  - Tuberculosis

- **Extreme Weather**
  - Extreme Weather-related injuries
  - Extreme Weather-related Deaths
Report Overview 2021 Update

The second edition includes:

• Data available for indicators from 2018-2020
• Discussion on mental health impacts
• Spotlight on 2020 wildfire season impacts on asthma-like ED admissions
Report Overview

Methods

Indicator Selection  Benchmark Period  Data Presentation
Key Takeaways

• **Few apparent long term trends.** In 2020 was unusual. Coinciding with the COVID-19 pandemic, several heat, air quality, and foodborne communicable disease health outcomes decreased in counts.

• **Acute events lead to major impacts.** Specific climate-related events caused spikes in health outcomes.

• **We need ways to measure mental health impacts.** There is a need for more robust and consistent tracking systems for mental health related impacts.
Data Observations

Heat-related ED Visit Counts
May-Sept
2016-2020

Heat-related ED Visit Rates per 100,000
May-Sept
2016-2020
Data Observations

Lyme Disease Counts
2010-2020

Lyme Disease Rates per 100,000
2010-2019
Data Observations

Campylobacteriosis Counts
2010-2020

Campylobacteriosis Rates per 100,000
2010-2019
Despite an overall decrease of asthma-like symptoms visits for the year of 2020, there were direct increases in ED visits in response to the September wildfires.

Average daily visits increased by 29% the four weeks during/after the wildfire in comparison to the four weeks before.
Mental Health and Climate Change

Different types and lengths of climate change events can create a range of mental health impacts:

• **Short and acute events** that last a few hours to a few weeks like heatwaves, extreme storms, or wildfires

• **Long periods of extended climate change events** like drought or recovery periods from acute events

• **Ongoing direct or indirect exposure** to the hazards of climate change like rising temperatures, rising sea levels, and other global and regional threats
Mental Health and Climate Change Indicator Review

Factors in indicator evaluation:

• Readiness
• Comparability
• Long-run baseline
• Geographic Specificity
• Causal Linkage
• Justice Lens

Data sources and indicators:

• Yale Climate Opinion Survey
  • Estimated percentage who are somewhat/very worried about global warming
  • Estimated percentage who think global warming will harm future generations a moderate amount/a great deal
  • Estimated percentage who think global warming will harm them personally a moderate amount/a great deal

• Oregon Healthy Teen Survey
  • Percentage of students that say that in general their emotional and mental health is poor
  • Percentage of students with mental health care needs that were not met in last 12 months
  • Percentage of students that meet Positive Youth Development benchmark

• 211
  • # of disaster related calls
Mental Health and Climate Change Landscape

Estimated Percentage of People Worried about Global Warming

Yale Climate Opinion Survey
Mental Health and Climate Change Landscape

Student Self-Rating of General Emotional and Mental Health

Oregon Healthy Teen Survey
Key Takeaways

• Few apparent long term trends.

• Acute events lead to major impacts.

• We need ways to measure climate-related mental health impacts.
Comments? Questions?