Date: September 19, 2019
Title of Talk: Climate Change & Effects on Health
CME DISCLAIMER

In support of improving patient care, this activity has been planned and implemented by the Robert Larner College of Medicine at the University of Vermont and the Vermont Medical Society. The University of Vermont is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

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Please watch your email for a link from the Vermont Medical Society to claim your CME credit.

**CME credit must be claimed within 30 days of participating in the event.**
VMS Third Thursday Webinar Series
Climate Change & Effects on Health

Speakers:
Dan Quinlan, M.B.A., M.S.
Jared Ulmer, MPH

Planning Committee Members:
Jessa Barnard, ESQ, Trey Dobson, M.D., FAAP & Stephanie Winters

Purpose Statement/Goal of This Activity:
To understand how climate change and health are directly correlated.

Learning Objectives:
Discussion regarding the nexus of climate change and the potential impacts on the health of Vermonters.

Disclosures:
Is there anything to Disclose?   Yes □ No □
Did this activity receive any commercial support?   Yes □ No □

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Climate Change & Health in Vermont

Dan Quinlan
Vermont Climate and Health Alliance
www.vtcha.org
View at National Geographic website
“New Normal” – Nope:  
*The Climate Will Not Stabilize Anytime Soon If We Don’t Act*

Observed Change In Winter Temperature In Burlington
“Climate Change is a Global Health Emergency”

Signed by 100 organizations from 125 countries representing 6 million health and medical providers
Mental Health

“Climate change will cause more psychological than physical harm for U.S. citizens and people around the world.”

Psychologists for Social Responsibility

- Acute
- Chronic
- Indirect
Climate change in Vermont
Health impacts and opportunities

Jared Ulmer
Climate & Health Program Manager
September 19, 2019
Building Resilience Against Climate Effects

CDC Climate Ready States and Cities Initiative

16 states, 2 cities
Climate change is already happening, and is expected to continue

**IN THE PAST 50 YEARS:**

- Average **AIR TEMPERATURES** have increased
  - **2°F** in summer
  - **4°F** in winter

- **SPRING** now arrives two weeks earlier
- **WINTER** starts one week later

- **ANNUAL PRECIPITATION** in Vermont has increased by almost 7 inches.

**NEARLY 100% OF CLIMATE SCIENTISTS AGREE:**

Greenhouse gas emissions from fossil fuel combustion in cars, power production, and manufacturing are causing the temperature of the earth to rise.
Climate change is increasing health risks in Vermont

- Water and foodborne diseases
- Vectorborne diseases
- Mental health
- Hot weather
- Cyanobacteria
- Extreme storm events
- Air pollution and pollen
Vermonters are at higher risk for heat illnesses when temperatures reach 87°F or warmer

Expect more days reaching 87°F in the future
2018 Heat Wave impacts

Heat-related **EMS calls** and **ED visits** increased with the **heat index** during the heat wave of July 2018. There were also four heat-related **deaths**.
Hot weather can worsen air quality

2018 Heat Wave
June 30th (92°F)    July 1st (96°F)    July 2nd (97°F)
Longer warm season and more CO₂ increase pollen, triggering allergies & asthma attacks

Source: US GCRP 2016, adapted from Ziska 2011
Warmer conditions contribute to increased risk of tick and mosquito-borne diseases

Reported cases of Lyme Disease* and Anaplasmosis in Vermont have increased over the past 10 years.

* Includes confirmed and probable cases.
Extreme weather events have become more frequent and costly, with immediate and ongoing health impacts.
Heavy rains can increase contaminated runoff into drinking and recreational waters, leading to illness.

*E. coli* detections increase after heavier precipitation.

<table>
<thead>
<tr>
<th>Precipitation preceding water sample:</th>
<th>Public drinking water</th>
<th>Private well water</th>
<th>Recreational water</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>0.10%</td>
<td>2.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>0.01 - 0.5&quot;</td>
<td>0.12%</td>
<td>2.9%</td>
<td>4.4%</td>
</tr>
<tr>
<td>0.5 - 1&quot;</td>
<td></td>
<td>4.4%</td>
<td>6.7%</td>
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<tr>
<td>1 - 1.5&quot;</td>
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<tr>
<td>1.5&quot; or more</td>
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</tbody>
</table>
Warmer water temperatures increase risk for cyanobacteria blooms that can produce harmful toxins.

Change in Lake Champlain temperature, 1964-2009.
Everyone’s health is threatened by climate change, though the threat is greater for some:

Climate change will disproportionately affect:

- People more exposed to climate effects
- People with pre-existing health vulnerabilities
- People with limited adaptation resources
Responding to climate change can benefit health now and in the future.
Climate & Health webpage: healthvermont.gov/climate

Online climate & health course: www.nephtc.org
Thank you!

Let’s stay in touch.

Email: ClimateHealth@vermont.gov
Web: www.healthvermont.gov
Social: @healthvermont
Solutions
(Dan)
Global Solutions
Vermont Solutions

How Can You Help?
(Dan)

You’ll be surprised how much you can do. And, some high impact things are easy and fast.
Vermont Climate & Health Alliance

VTCHA.org

“Our mission is to use our expertise to inform the public and our lawmakers about the effects of climate change on human and animal health.”
1. Help Us Inform Vermonters
(You are all trusted messengers.)

**Action:** Contact us.

[DEPARTMENT OF HEALTH](#)
[VTCHA](#)

[jared.ulmer@vermont.gov](mailto:jared.ulmer@vermont.gov)
[contact@vtcha.org](mailto:contact@vtcha.org)
2. Attend a “Global Climate Strike” rally tomorrow
(Wear your white coats.)

**Action:** The big rally is at Burlington City Hall (12-2). Others can be found at: vermontclimatestrike.org
3. Lower Your Carbon Footprint.
   (And, typically save money too.)

**Action:** A few minutes of web research will lead you to many lists of the Top 10 things you can do.
4. Speak-up.
(Democracy is a team sport.)

**Action:** Contact legislative leaders in the State House.

"Scientists are saying we have about 12 years to address climate change, and to protect our kids and our communities. Vermont's greenhouse gas emissions have risen by 16% since 1990. It is time to for Vermont to start passing legislation commensurate to the challenge."

(Go to [www.vtcha.org/speakup](http://www.vtcha.org/speakup))
5. Learn About the Policy Conversation in Vermont.
(You don’t need to become a policy wonk. Just informed.)

**Action:** Learn about one big idea that will lower Vermont’s carbon pollution:
(a) more electric vehicles, (b) wider use of public transportation, (c) lowering energy use in buildings, (d) carbon pricing and/or (e) the Global Warming Solutions Act

**Read what experts say. Decide what you think.**
Ignore the one-liners – especially about the adverse effects of proposed policies on the health and well-being of low income Vermonters.
They’re almost always intentionally misleading and false.
Most of the policies proposed are designed to help this population.
"OF COURSE WE NEED HOPE. BUT THE ONE THING WE NEED MORE THAN HOPE, IS ACTION. BECAUSE ONCE WE START TO ACT, HOPE IS EVERYWHERE."

Greta Thunberg

#sustainableish
THANK YOU VMS!

Vermont Climate and Health Alliance: www.vtcha.org

E-mail: contact@vtcha.org

Facebook: www.facebook.com/VTCHA55/
Back-Up
Legislative Leaders’ Contact Information

You’ll find message/contact forms on their webpages

The Governor’s office: governor.vermont.gov/contact-us/message

Speaker Johnson’s office: speaker.vermont.gov/content/contact

Senate President pro tem Ashe’s office: protem.vermont.gov/contact
Climate change will disproportionately affect those:

- who are more exposed to weather events
- who have pre-existing health conditions
- who are unable to get out of the way
- do not have the financial capability to rebuild and rebound
- have less political power
National Security Implications of Climate-Related Risks and a Changing Climate
Report Deliver to Congress 7/23/15