

# United States Senate

WASHINGTON, DC 20510

August 10, 2020

Dr. Robert Redfield  
Director  
Centers for Disease Control and Prevention  
200 Independence Avenue S.W.  
Washington, DC 20201

Dear Director Redfield,

Last year, Massachusetts faced the worst outbreak in over 50 years of Eastern Equine Encephalitis (EEE), a rare but deadly mosquito-borne virus.<sup>1</sup> Reports suggest that this year, Massachusetts and other states may once again face a record number of EEE cases, and that EEE hotspots may be spreading.<sup>2</sup> Meanwhile, decades of underfunding have left public health departments battling COVID-19 with few choices but to redirect resources away from mosquito-borne illness prevention.<sup>3</sup> The Centers for Disease Control and Prevention (CDC) has emphasized the importance of continuing mosquito control and prevention during public health emergencies,<sup>4</sup> but unless state and local governments receive the support and resources necessary to do so, one public health crisis may exacerbate another.

EEE is a virus that causes swelling in the brain and is spread by a bite from an infected mosquito.<sup>5</sup> The virus is extremely rare, with an average of seven human cases reported to the CDC annually in the United States.<sup>6</sup> However, approximately a third of those infected with EEE die, and those who recover often face devastating neurological complications, making it one of the most severe mosquito-borne diseases in the United States.<sup>7</sup> There are currently no specific treatments, preventative drugs, or vaccines available for EEE in humans.<sup>8</sup>

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<sup>1</sup> USA Today, “Deadly EEE: Parts of nation see worst outbreak of brain-swelling, mosquito virus in more than a half-century,” Joey Garrison, September 30, 2019, <https://www.usatoday.com/story/news/nation/2019/09/30/deadly-mosquito-borne-eee-virus-outbreak-parts-northeast-see-worst-outbreak-brain-swelling-mosquito/2445131001/>.

<sup>2</sup> Associated Press, “First COVID-19, now mosquitoes: Bracing for bug-borne ills,” Philip Marcelo, July 20, 2020, <https://apnews.com/d588bb4f42d92dca86c43443204fe1ba>.

<sup>3</sup> Associated Press, “Mosquitoes flying free as health departments focus on virus,” Anna Maria Barry-Jester and Lauren Weber, July 16, 2020, <https://apnews.com/bc7a3de603413b95676f4fe451cb840b>.

<sup>4</sup> Letter from Dr. Robert Redfield, Centers for Disease Control and Prevention, to Senator Elizabeth Warren, March 16, 2020.

<sup>5</sup> Centers for Disease Control and Prevention, “Eastern Equine Encephalitis: Frequently Asked Questions,” <https://www.cdc.gov/easternequineencephalitis/gen/qa.html> (last visited August 10, 2020).

<sup>6</sup> Centers for Disease Control and Prevention, “Eastern Equine Encephalitis: Statistics & Maps,” <https://www.cdc.gov/easternequineencephalitis/tech/epi.html> (last visited August 10, 2020).

<sup>7</sup> *Id.*

<sup>8</sup> Centers for Disease Control and Prevention, “Eastern Equine Encephalitis: Frequently Asked Questions,” <https://www.cdc.gov/easternequineencephalitis/gen/qa.html> (last visited August 10, 2020).

Based on early reports, it appears that Massachusetts and other states may face another record year of EEE cases.<sup>9</sup> Last summer, EEE surged across the United States, with 38 cases nationwide – up from the usual half a dozen cases.<sup>10</sup> Massachusetts was one of the states hit hardest, with 12 cases and 6 fatalities. Because typical EEE outbreaks last for two to three years, high case counts are likely to continue.<sup>11</sup> Now, officials in Massachusetts have detected EEE in mosquitoes earlier than any of the previous twenty years.<sup>12</sup> Two of the earliest cases discovered in the state were found beyond the virus’ usual hotspots, suggesting the disease may have spread farther than originally anticipated.<sup>13</sup>

The public health challenges presented by the COVID-19 pandemic have been far-reaching, and these challenges add another layer of complexity in addressing pre-existing public health problems. The CDC’s recent policy brief on mosquito-borne disease prevention recommends that “mosquito surveillance and control should be maintained by state and local mosquito control organizations to the extent that local conditions and resources will allow.”<sup>14</sup> However, decades of chronic underfunding have left many public health departments with few choices but to redirect resources from these efforts to confront COVID-19. Already, some staffers who typically set mosquito traps have been redeployed to COVID-19 call centers. Elsewhere, state labs are too overwhelmed with COVID-19 tests to test mosquito samples for deadly illnesses.<sup>15</sup> As state and local governments face additional revenue shortfalls, mosquito control efforts could see further cuts, too.

The failure to adequately fund mosquito surveillance and control could have negative long-term effects. According to the CDC’s recent brief, “a lapse in services can reduce the efficacy of control strategies after they are reinstated.”<sup>16</sup> This is particularly worrisome given that unfortunately, evidence suggests that climate change could increase the risk of EEE during future mosquito seasons.<sup>17</sup> The combination of expanding EEE hotspots and less effective control strategies could put more lives at risk.

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<sup>9</sup> Associated Press, “First COVID-19, now mosquitoes: Bracing for bug-borne ills,” Philip Marcelo, July 20, 2020, <https://apnews.com/d588bb4f42d92dca86c43443204fe1ba>.

<sup>10</sup> Centers for Disease Control and Prevention, “Neuroinvasive Disease Prevalence,” [https://wwwn.cdc.gov/arbovet/maps/ADB\\_Diseases\\_Map/index.html](https://wwwn.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html) (last accessed August 10, 2020).

<sup>11</sup> NBC Boston, “Another Public Health Hazard? Baker Warns of Early EEE Threat,” Marc Fortier, July 7, 2020, <https://www.nbcboston.com/news/local/another-public-health-hazard-gov-baker-to-speak-on-early-eee-threat/2155129/>.

<sup>12</sup> WBUR, “State Bracing For High Number Of Mosquito-Borne EEE Cases,” July 7, 2020, <https://www.wbur.org/commonhealth/2020/07/07/eastern-equine-encephalitis-eee-massachusetts-cases>.

<sup>13</sup> Associated Press, “First COVID-19, now mosquitoes: Bracing for bug-borne ills,” Philip Marcelo, July 20, 2020, <https://apnews.com/d588bb4f42d92dca86c43443204fe1ba>.

<sup>14</sup> Centers for Disease Control and Prevention, “Continuation of Mosquito Surveillance and Control During Public Health Emergencies and Natural Disasters,” July 17, 2020, [https://www.cdc.gov/mmwr/volumes/69/wr/mm6928a6.htm?s\\_cid=mm6928a6\\_w](https://www.cdc.gov/mmwr/volumes/69/wr/mm6928a6.htm?s_cid=mm6928a6_w).

<sup>15</sup> Kaiser Health News, “Disease-Carrying Mosquitoes Fly Free as Health Departments Focus on Coronavirus,” Anna Maria Barry-Jester and Lauren Weber, July 16, 2020, <https://khn.org/news/disease-carrying-mosquitoes-fly-free-as-health-departments-focus-on-coronavirus/>.

<sup>16</sup> Centers for Disease Control and Prevention, “Continuation of Mosquito Surveillance and Control During Public Health Emergencies and Natural Disasters,” July 17, 2020, [https://www.cdc.gov/mmwr/volumes/69/wr/mm6928a6.htm?s\\_cid=mm6928a6\\_w](https://www.cdc.gov/mmwr/volumes/69/wr/mm6928a6.htm?s_cid=mm6928a6_w).

<sup>17</sup> Letter from Senator Elizabeth Warren and Senator Edward Markey to CDC Director Robert Redfield, January 1, 2020,

We urge the CDC to continue to find every opportunity to support state and local governments and other agencies to address the threat of EEE and other vector-borne viruses. In your response to my January 2020 letter requesting information on CDC’s plans to address an EEE resurgence, you stated that “supporting state and local vector-borne disease prevention and control programs is a priority for CDC, since disease cases ... tripled from [sic] 2004 and 2016.”<sup>18</sup> To better understand how you are supporting state and local health prevention efforts to combat the growing threat of EEE—and how these efforts have been impacted by the COVID-19 public health emergency—we ask that you provide answers to the following questions no later than September 1, 2020:

1. What have CDC’s early-seasons surveillance activities demonstrated about the risk of EEE in 2020 as compared to 2019?
2. What kind of vector control support has the CDC provided to states impacted by EEE, and how does it compare to support provided in 2019? What kind of vector control support has the CDC provided to Massachusetts specifically? Please discuss the provision of technical assistance, the deployment of skilled vector workforces, and the degree of funding provided through the ELC cooperative agreement and the Vector-Borne Diseases Regional Centers of Excellence.
3. What additional vector control support is the CDC planning to provide to states impacted by EEE?
4. Has the CDC issued updated EEE guidelines or resources to states for 2020? If so, please provide the updated guidelines and resources. If not, please provide an update as to when the states can expect these guidelines and resources.
5. How should state and local public health departments facing resource constraints balance COVID-19 response efforts and EEE preparedness efforts?
6. Has the CDC had to redirect resources away from EEE research and surveillance due to COVID-19?
7. What negative environmental and health effects could stem from the use of pesticides that the CDC recommends in its latest policy brief?
8. Has the CDC found that EEE and other vector-borne diseases have disparate health impacts on vulnerable populations?

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<https://www.warren.senate.gov/imo/media/doc/2020.01.28%20Letter%20to%20CDC%20re%20Eastern%20Equine%20Encephalitis%201.pdf>, Footnote 8 (A. Ludwig et al, “Increased risk of endemic mosquito-borne diseases in Canada due to climate change,” Canada Communicable Diseases Report (April 4, 2019)

[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6587694/.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6587694/))

<sup>18</sup> Letter from Dr. Robert Redfield, Centers for Disease Control and Prevention, to Senator Elizabeth Warren, March 16, 2020.

9. What has the CDC discovered about the role of climate change in the rise and spread of vector-borne diseases, including EEE? Specifically, what have the CDC's Climate and Health Program partners found?
  
10. What other actions can the federal government undertake to address the rise of EEE and other vector-borne diseases as state and local health departments find themselves overwhelmed by efforts to respond to COVID-19?

Sincerely,



Elizabeth Warren  
United States Senator



Edward J. Markey  
United States Senator