

## MEMORANDUM

**TO:** House Legislative Committee on Government Operations

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**SUBJECT:** Temporary Municipal Mask Mandate Act

**DATE:** November 21, 2021

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I am a public health expert and Policy Fellow at the Nelson A. Rockefeller Center for Public Policy at Dartmouth College. Since March 2020, I have focused my research on COVID-19 and rural health equity in New Hampshire and Vermont. I am also a member of a team of New England experts that proposed data-driven mask policies in a recent opinion editorial in USA TODAY.<sup>1</sup> This testimony is based upon my independent analysis and does not represent the views of Dartmouth College or other entities.

In this written testimony, I will do the following: 1) describe why Vermont's current public health situation warrants a mask policy, 2) review the evidence on masking and mask policies, 3) explore challenges with the implementation of the Temporary Municipal Mask Mandate Act,<sup>2</sup> and 4) propose a data-driven mask policy.

### **1. Why Vermont's Current Situation Warrants a Mask Policy**

Vermont has achieved significant progress in vaccination, but like other highly vaccinated settings, is experiencing a significant surge driven by the Delta variant.

We have growing evidence that while vaccination remains our primary strategy for ending the pandemic, vaccine-only strategies are insufficient to control the Delta variant and mitigate its widespread impacts on schools, health systems, businesses, and other areas of life. Vaccines remain highly effective at reducing hospitalization and death; however, emerging evidence shows that protection from infection and transmission wanes within months of vaccination.<sup>3</sup> We are also learning that vaccine efficacy against hospitalization declines for older adults and individuals with underlying medical conditions in the Delta-variant dominant period, indicating the need to prioritize booster

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<sup>1</sup> Raifman, Sosin et al. "Our best shot at controlling COVID: Data-driven mask mandates amplify protection of vaccines." *USA Today*, September 9, 2021. <https://www.usatoday.com/story/opinion/2021/09/09/use-masks-data-vaccines-manage-covid-cases-climb/5715127001/>

<sup>2</sup> <https://legislature.vermont.gov/Documents/2022/WorkGroups/Senate%20Government%20Operations/Bills/21-1038/Drafts,%20Amendments,%20and%20Legal%20Documents/W~Jaye%20Johnson~DRAFT%20Legislation%2011.16.21~11-19-2021.pdf>

<sup>3</sup> Link-Gelles, R. (2021). COVID-19 vaccine effectiveness in the United States. <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2021-09-22/04-COVID-Link-Gelles-508.pdf>

doses for these groups.<sup>4</sup> Several recent studies have demonstrated that vaccinated people can become infected and transmit the virus, and under some conditions as efficiently as unvaccinated people.<sup>5,6,7</sup>

As a result, high COVID-19 transmission is occurring even in heavily vaccinated settings. European countries that achieved similarly high levels of vaccination, including Denmark, are also seeing a rapid resurgence of infections.<sup>8</sup> Spain, a country that achieved a high level of vaccination but that has also maintained other non-pharmaceutical interventions including masking has avoided the current surge affecting Northern Europe.<sup>9</sup> Communities that achieved near universal vaccination of their eligible population have also seen outbreaks.<sup>10</sup>

Vermont currently has the 9th highest incidence of COVID-19 in the US and has had one of the fastest case growth rates in the US in November.<sup>11</sup> This fall, the Delta surge has resulted in a number of pandemic records in Vermont--the highest single-day case counts, the highest 7-day rolling average, record cases in our schools, hospitalizations approaching our pandemic record, highest rates of infection in children too young to be vaccinated.<sup>12,13,14</sup> More than 30% of all Vermont's pandemic deaths have occurred since the start of September.<sup>15</sup>

Topline indicators obscure the widespread impacts of the surge. Since the school year began, Vermont has recorded 1768 infectious cases in schools.<sup>16</sup> By conservative estimates, that translates to 12,376 lost days of in-person instruction.<sup>17</sup> This estimate does not include loss of in-person instruction for the thousands of students forced to quarantine, some repeatedly, in the first months of school. It also does not capture lost days of work for parents or the impacts on Vermont employers experiencing workforce shortages.

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<sup>4</sup> Link-Gelles, R. (2021). COVID-19 vaccine effectiveness in the United

States.<https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2021-09-22/04-COVID-Link-Gelles-508.pdf>

<sup>5</sup> Brown, C. M., Vostok, J., Johnson, H., Burns, M., Gharpure, R., Sami, S., ... & Laney, A. S. (2021). Outbreak of SARS-CoV-2 infections, including COVID-19 vaccine breakthrough infections, associated with large public gatherings—Barnstable County, Massachusetts, July 2021. *Morbidity and Mortality Weekly Report*, 70(31), 1059.

<https://www.cdc.gov/mmwr/volumes/70/wr/mm7031e2.htm>

<sup>6</sup> Siddle, K. J., Krasilnikova, L. A., Moreno, G. K., Schaffner, S. F., Vostok, J., Fitzgerald, N. A., ... & Sabeti, P. C. (2021). Evidence of transmission from fully vaccinated individuals in a large outbreak of the SARS-CoV-2 Delta variant in Provincetown, Massachusetts. *Medrxiv*. Preprint.

<sup>7</sup> Singanayagam, A., Hakki, S., Dunning, J., Madon, K. J., Crone, M. A., Koycheva, A., ... & Lackenby, A. (2021). Community transmission and viral load kinetics of the SARS-CoV-2 delta (B. 1.617. 2) variant in vaccinated and unvaccinated individuals in the UK: a prospective, longitudinal, cohort study. *The Lancet Infectious Diseases*.

[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(21\)00648-4/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(21)00648-4/fulltext).

<sup>8</sup> Picheta, Rob, "Europe is learning a crucial lesson -- vaccines work, but they alone won't stop Covid now," August 20, 2021.

<https://www.cnn.com/2021/11/19/europe/europe-covid-vaccination-rates-fourth-wave-cmd-intl/index.html>

<sup>9</sup> Rossi, Melisa, "Why Spain Has Avoided Europe's Covid Surge," November 17, 2021. <https://news.yahoo.com/why-spain-has-avoided-europes-covid-surge-100025909.html>.

<sup>10</sup> "In one of the country's most vaccinated places, masks were still key to slowing Covid-19,"

<https://www.cnn.com/2021/10/01/health/covid-vaccine-colorado-tourist-town/index.html>

<sup>11</sup> New York Times data, <https://www.nytimes.com/interactive/2021/us/covid-cases.html>; Accessed November 21, 2021.

<sup>12</sup> Vermont Open Geodata Portal, <https://geodata.vermont.gov/datasets/vt-covid-19-daily-counts-table/explore?showTable=true>; Accessed November 21, 2021.

<sup>13</sup> Vermont Open Geodata Portal, <https://geodata.vermont.gov/datasets/vt-covid-19-hospitalizations-by-date-emr/explore>; Accessed November 21, 2021.

<sup>14</sup> DFR Covid-19 Modeling, [https://dfr.vermont.gov/sites/finreg/files/doc\\_library/dfr-covid19-modeling-111621.pdf](https://dfr.vermont.gov/sites/finreg/files/doc_library/dfr-covid19-modeling-111621.pdf); Accessed November 20, 2021.

<sup>15</sup> Vermont Open Geodata Portal, <https://geodata.vermont.gov/datasets/vt-covid-19-daily-counts-table/explore?showTable=true>; Accessed November 21, 2021.

<sup>16</sup> COVID-19 Cases in Vermont K-12 Learning Communities While Infectious, Vermont Department of Health, Nov. 15; Accessed November 20, 2021. <https://www.healthvermont.gov/sites/default/files/documents/pdf/COVID19-Transmission-Schools.pdf>; Accessed November 20.

<sup>17</sup> This estimate is based on an average of 7 lost days of school per case, accounting for 10-day isolation periods and weekends.

The Delta surge is also exacerbating significant strains on Vermont health systems. Healthcare leaders at academic medical centers and critical access hospitals report that COVID-19 is already affecting access to care for non-COVID patients across the region.<sup>18</sup> Regional hospitals report making upwards of 30 calls to transfer patients for critical care, and many non-COVID patients languish in hospitals for lack of access to appropriate care. Vermont’s ICU capacity is currently at 85-90%; functionally, an ICU is completely full when it reaches 85% capacity.<sup>19</sup> Further, a new modeling study released by the CDC estimated that when ICUs reach 75% capacity, patient care suffers and leads to excess death from other conditions.<sup>20</sup> While COVID-19 is not the only driver of health systems strain, it is the most modifiable factor through public health interventions. We cannot predict or prevent heart attacks or traumas or solve an acute-on-chronic health workforce shortage with short-term public health interventions.<sup>21</sup> We can, however, rapidly deploy evidence-based policies to control COVID-19.

Several factors, including high population mobility, continued return to in-person work, heightened travel, the absence of nonpharmaceutical interventions, and the presence of the highly transmissible Delta variant, support projections that Vermont will continue to see sustained or growing levels of infection. Vermont is making tremendous progress in vaccinating children 5-11 and in delivering boosters; however, only 26% of children have received their first dose and 34% of Vermonters have received a booster.<sup>22</sup> It is essential that Vermont employ other policy strategies to control COVID-19 and mitigate its secondary impacts while it continues to vaccinate children and deliver boosters to eligible adults.

## 2. Evidence and Data on Masking and Mask Policies

We have significant and consistent evidence in support of masking and mask policies as a tool for controlling COVID-19.<sup>23</sup> Two policy studies have demonstrated that state-level face mask mandates are associated with reduced COVID-19 growth rates.<sup>24,25</sup> A large randomized control trial, considered the strongest form of evidence, found that increasing masking from 14 to 43 percent resulted in a 34% decrease in COVID-19 in older adults, the group at highest risk of hospitalization and death.<sup>26</sup> Lab studies have shown that even basic cloth masks can block more than 50% of aerosols, and higher-quality masks provide even greater protection.<sup>27</sup> Two new studies on school masking from the CDC during the Delta surge show a large effect of masking on cases and quarantines, together providing evidence that masking

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<sup>18</sup> Doyle-Burr, Nora, “COVID-19 drives crunch for beds in Upper Valley hospitals,” October 28, 2021.

<https://www.vnews.com/ICU-beds-hard-to-find-amid-workforce-shortage-and-COVID-19-surge-43246877>.

<sup>19</sup> Stenehjem, Edward, “COVID-19: What it means for a hospital ICU to be at capacity,” November 23, 2021.

<https://intermountainhealthcare.org/blogs/topics/covid-19/2020/11/covid-19-what-it-means-for-a-hospital-icu-to-be-at-capacity/>.

<sup>20</sup> French G, Hulse M, Nguyen D, et al. Impact of Hospital Strain on Excess Deaths During the COVID-19 Pandemic — United States, July 2020–July 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:1613–1616. DOI:

<http://dx.doi.org/10.15585/mmwr.mm7046a5>

<sup>21</sup> French G, Hulse M, Nguyen D, et al. Impact of Hospital Strain on Excess Deaths During the COVID-19 Pandemic — United States, July 2020–July 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:1613–1616. DOI:

<http://dx.doi.org/10.15585/mmwr.mm7046a5>.

<sup>22</sup> Vermont Department of Health Vaccine Dashboard, <https://www.healthvermont.gov/covid-19/vaccine/covid-19-vaccine-dashboard>

<sup>23</sup> Brooks, J. T., & Butler, J. C. (2021). Effectiveness of mask wearing to control community spread of SARS-CoV-2. *Jama*, 325(10), 998-999. <https://jamanetwork.com/journals/jama/fullarticle/2776536>

<sup>24</sup> Lyu, W., & Wehby, G. L. (2020). Community Use Of Face Masks And COVID-19: Evidence From A Natural Experiment Of State Mandates In The US: Study examines impact on COVID-19 growth rates associated with state government mandates requiring face mask use in public. *Health affairs*, 39(8), 1419-1425. <https://doi.org/10.1377/hlthaff.2020.00818>.

<sup>25</sup> F Joo, H., Miller, G. F., Sunshine, G., Gakh, M., Pike, J., Havers, F. P., ... & Coronado, F. (2021). Decline in COVID-19 hospitalization growth rates associated with statewide mask mandates—10 states, March–October 2020. *Morbidity and Mortality Weekly Report*, 70(6), 212.

<sup>26</sup> Abaluck, J., Kwong, L. H., Styczynski, A., Haque, A., Kabir, M. A., Bates-Jefferys, E., ... & Mobarak, A. M. (2021). *Normalizing Community Mask-Wearing: A Cluster Randomized Trial in Bangladesh* (No. w28734). National Bureau of Economic Research.

<sup>27</sup> Lindsley, W. G., Blachere, F. M., Law, B. F., Beezhold, D. H., & Noti, J. D. (2021). Efficacy of face masks, neck gaiters and face shields for reducing the expulsion of simulated cough-generated aerosols. *Aerosol Science and Technology*, 55(4), 449-457. <https://www.tandfonline.com/doi/full/10.1080/02786826.2020.1862409>.

continues to remain effective against the highly transmissible Delta variant.<sup>28,29</sup> These studies add up to a clear conclusion: masks and mask policies represent a critical strategy for controlling COVID-19.

On July 27, the CDC changed its guidance to recommend universal indoor masking for vaccinated and unvaccinated persons in areas of substantial or high transmission.<sup>30</sup> Six states currently have a mask mandate in place. States that reintroduced mandates following the change in CDC guidance saw immediate and significant increases in masking.<sup>31</sup> Masking currently ranges from 51-67% in states with mandates compared to 33% in Vermont.<sup>32</sup> Notably, Vermont achieved 86% community masking when its state mandate was in place, compliance that was above the highest reported level in all states with masking mandates currently in place. In Hawaii, the state with previous levels of masking most comparable to Vermont at 82%, 67% of residents currently report masking, twice as high as in Vermont. While public health experts rely on peer reviewed studies and not point-in-time comparisons of states to assess the effectiveness of masking policies on controlling COVID-19, we currently see that five of the six states with mask policies have rates of infection significantly lower than Vermont.<sup>33</sup>

While opposition to masking dominates media coverage, national polling data from November shows that a majority of Americans continue to support mask mandates.<sup>34</sup> We do not have polling data available from Vermont; however, a public records request of constituent communications to Governor Scott provides some insight into public opinion on mask mandates in Vermont.<sup>35</sup> 324 of 357, or 90% of constituents who contacted Gov. Scott between September 21 to October 25 on the subject of mask mandates or COVID mitigation measures expressed support for at least a mask mandate. Only 33 constituents expressed opposition to a mandate. Several additional constituents contacting Governor Scott did not ask explicitly for a mask policy, and are therefore not included in this total, but called for a more aggressive public health response.

### **3. Why the Temporary Municipal Mask Mandate Act Will Not Work**

Governor Scott's proposed Temporary Town Mask Mandate Act will not work and is contrary to science. I encourage the Legislature to work with the Governor to pass a law that is data-driven and will most effectively protect Vermonters from COVID-19 and mitigate the impacts we are currently seeing on our health systems and schools. I am concerned that a local control approach will have suboptimal public health impact, unnecessarily burden municipal leaders with making and implementing public health decisions, and exacerbate health, educational, and economic disparities.

A town-by-town approach falls short of the aggressive statewide strategies needed to address Vermont's current public health crisis. Individuals, households, and communities live, learn, and work, and recreate across multiple communities, counties, and even state lines. Many schools draw students from several communities. Viral transmission does not respect town boundaries, and piecemeal policies to disrupt it will therefore be less effective.

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<sup>28</sup> Jehn M, McCullough JM, Dale AP, et al. Association Between K–12 School Mask Policies and School-Associated COVID-19 Outbreaks — Maricopa and Pima Counties, Arizona, July–August 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:1372–1373. DOI: <http://dx.doi.org/10.15585/mmwr.mm7039e1>.

<sup>29</sup> Budzyn SE, Panaggio MJ, Parks SE, et al. Pediatric COVID-19 Cases in Counties With and Without School Mask Requirements — United States, July 1–September 4, 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:1377–1378. DOI: <http://dx.doi.org/10.15585/mmwr.mm7039e3>.

<sup>30</sup> <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html>.

<sup>31</sup> COVID-19 Projections, Institute for Health Metrics and Evaluation (IHME), <https://covid19.healthdata.org/global>, Accessed November 20, 2021.

<sup>32</sup> COVID-19 Projections, Accessed November 20, 2021.

<sup>33</sup> New York Times data, <https://www.nytimes.com/interactive/2021/us/covid-cases.html>, Accessed November 21, 2021.

<sup>34</sup> Axios/Ipsos Topline polling, A survey of the American general population (ages 18+), Nov. 5-8.

[https://www.ipsos.com/sites/default/files/ct/news/documents/2021-11/Topline\\_Axios\\_Ipsos%20W57.pdf#page122](https://www.ipsos.com/sites/default/files/ct/news/documents/2021-11/Topline_Axios_Ipsos%20W57.pdf#page122).

<sup>35</sup> Vermont public records request of constituent communications on COVID mask mandates and mitigation policy from September 21 to October 25, 2021 to Governor Scott, submitted by Alexis Dubief, data shared with author on November 21, 2021.

Public health strategies work best when designed with common policies, metrics, and communications. The Temporary Town Mask Mandate Act does not provide city councils, selectboards, and town officials a framework to make decisions amid rapidly evolving epidemiological conditions. As such, it will lead to a fragmentation of policies and create confusion across the state. It will also further burden the community healthcare providers that municipalities, schools and other institutions often enlist to advise on local public health decisions.

I am further concerned that the proposed policy will exacerbate racial, rural, and income disparities in health and education. While available data tells us that 33% of Vermonters are currently masking, masking is not distributed evenly across Vermont communities. Communities with lower baseline masking and vaccination coverage, and therefore where a policy has the most potential for impact, will likely have less technical expertise and political support to enact local mandates than those with higher baseline masking. Burlington and Montpelier, municipalities with higher observed levels of community masking, have already expressed their intent to enact mandates.<sup>36,37</sup> Towns in Franklin County, where pre-K-12 schools are closed this week in response to an overwhelming number of COVID cases, will be less likely to implement mandates.

#### **4. Why a Data Driven Mask Policy Offers a Better Approach**

I would like to propose that Vermont adopt a data-driven mask policy as an alternative to town-by-town mask policies. Data-driven mask policies link to CDC guidance and metrics and turn masking on automatically when count transmission reaches substantial or high levels and off again when it subsides. These policies also update in response to changes in CDC guidance and eliminate the need for state policymakers and local officials to go back to the drawing board if CDC recommendations or local conditions change. This approach lends itself to clear communication for public officials, businesses, and other community institutions. Nevada has a data-driven policy based on county transmission that offers a blueprint for Vermont.<sup>38</sup>

Data-driven policies are also responsive to Vermont's rapidly evolving epidemic. If Vermont succeeds in decreasing transmission in Vermont through vaccination, boosters, masking, and other interventions, masking policies can turn off. If a new variant drives a surge, policies can automatically turn on again. Towns would not need to reconvene and scrutinize case counts or urgently react if an outbreak in a prison or workplace spilled into a local community. This enhances efficiency and minimizes burdens on local communities. State agencies would not need to review requests for changes on a monthly basis or respond to emergent crises across the state. Where state employees are already overwhelmed and agencies are short-staffed, a policy that does not require review will ease administrative burdens at state level as well.

#### **Conclusion**

Mask policies buy Vermont time to vaccinate children, boost eligible adults, and relieve pressures on health systems, schools, and the economy. They are a tool for preventing the many forced closures of schools, lost days of work for parents, and workplace outbreaks. They give winter tourists the confidence that COVID-19 is controlled and that they will receive appropriate and timely medical care if they are injured skiing or snowboarding.<sup>39</sup> None of us in Vermont wanted to be in this place after the hard work that we have done to reach the country's highest levels of vaccination; however, Vermont legislators now have an opportunity to make a policy choice that will protect the health, education, and economy of Vermonters and offer a roadmap for how to manage the Delta surge. I urge Vermont legislators and Governor Scott to enact a data-driven mask policy.

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<sup>36</sup> Lyons, Jack, Burlington Appears Poised for Mask Mandate if Legislators Governor Approve Plan" *VT Digger*, November 21, 2021. <https://vtdigger.org/2021/11/21/burlington-appears-poised-for-mask-mandate-if-legislators-governor-approve-plan/>

<sup>37</sup> Correspondence from Montpelier City Manager Tom Fraser to Governor Phil Scott, November 19, 2021.

<sup>38</sup> <https://nvhealthresponse.nv.gov/wp-content/uploads/2021/07/7.26.21-CDC-Masks.pdf>

<sup>39</sup> Rahman, M. K., Gazi, M. A. I., Bhuiyan, M. A., & Rahaman, M. A. (2021). Effect of Covid-19 pandemic on tourist travel risk and management perceptions. *Plos one*, 16(9), e0256486. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0256486>