



PREPARED FOR  
Virginia Department of Labor and Industry



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# ECONOMIC IMPACT

## **PROPOSED AMENDMENTS TO THE VOSH STANDARD FOR INFECTIOUS DISEASE PREVENTION OF THE SARS-COV-2 VIRUS THAT CAUSES COVID-19**

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## 1. Background

During the COVID-19 pandemic, the Commonwealth of Virginia was the first state to issue a mandatory COVID-19 Emergency Temporary Standard (ETS) establishing workplace safety and health requirements to mitigate the spread of the SARS-CoV-2 virus.<sup>1</sup>

The ETS, 16VAC25-220,<sup>2</sup> was adopted by the Virginia Safety and Health Codes Board (Board) and published by the Virginia Department of Labor and Industry (DOLI). The effective date of the ETS was July 27, 2020, and applied to all Virginia employers under the jurisdiction of the Virginia Occupational Safety and Health (VOSH) program. The ETS lapsed on January 26, 2021.

To replace the ETS, the Board adopted a permanent VOSH Standard, 16VAC25-220,<sup>3</sup> which took effect on January 27, 2021. This standard is designed to supplement and enhance existing VOSH laws, rules, regulations, and standards applicable directly or indirectly to the SARS-CoV-2 virus or COVID-19 disease-related hazards.

On June 29, 2021, the Board adopted proposed amendments (amendments) to the standard, which are the subject of this Economic Impact Analysis (EIA). The amendments address the advent of widely available and effective vaccines in Virginia, updated CDC guidelines, and revised relevant requirements for employers.

Chmura Economics & Analytics (Chmura) was commissioned by DOLI to conduct the EIA for the amendments to 16VAC25-220. Chmura understands that regarding the amendments, there are several components to be addressed in the EIA. The analysis will include the following elements:

- Number of businesses and other entities impacted, including the number of small businesses
- Localities disproportionately impacted
- Projected employment affected
- Projected incremental costs for affected businesses, localities, or entities from implementing the standard

Information from DOLI indicates that some items listed in this standard overlap with existing federal or state regulations/requirements, or the governor's executive order issued during the COVID-19 pandemic

<sup>1</sup> Source: <https://www.doli.virginia.gov/archive-page-for-all-ets-related-material/>.

<sup>2</sup> Source: <https://www.doli.virginia.gov/wp-content/uploads/2020/07/RIS-filed-RTD-Final-ETS-7.24.2020.pdf>.

<sup>3</sup> Source: <https://www.doli.virginia.gov/wp-content/uploads/2021/01/Final-Standard-for-Infectious-Disease-Prevention-of-the-Virus-That-Causes-COVID-19-16-VAC25-220-1.27.2021.pdf>.

(currently Executive Order 79.<sup>4</sup> For instance, a small number of the requirements with associated costs related to the Commonwealth's response to the COVID-19 pandemic are contained in Governor's Executive Order 79 (K-12 employees must wear facemasks (face coverings in VOSH Standard) while on school grounds), and the Transportation Security Administration's (TSA) requirement that employees wear face masks on commercial flights, buses and trains through Jan. 18, 2022.<sup>5</sup>

To the extent that a requirement is included in both the VOSH Standard, and executive orders or existing federal or state regulations/requirements, DOLI does not consider the standard to impose any new cost burden on a covered locality or employer. This economic impact analysis only assesses incremental costs to Virginia businesses.

In addition, many of the costs associated with COVID-19 workplace hazards are the result of requirements contained in current federal Occupational Safety and Health Administration (OSHA) or VOSH unique standards and regulations already applicable to private and public sector employers, including local governments. Therefore, DOLI does not consider them to be new costs associated with adoption of the proposed amendments to the standard.

NOTE: The Department of Labor and Industry (DOLI) has consulted with the Virginia Department of Health (VDH) about whether revisions should be recommended to the Board's Proposed Amendments to the VOSH Standard originally adopted on June 29, 2021, in response to the CDC's updated guidance<sup>6</sup> for fully vaccinated people issued on July 27, 2021 (requirement in certain situations for fully vaccinated employees to wear face coverings in areas of substantial or high transmission).

DOLI and VDH are in agreement that some revisions<sup>7</sup> should be recommended to the Board along with the Governor's amendment to 16VAC25-220-10.E.

The Dept. invited the public to comment on the Revised Proposed Amendments to the VOSH Standard by using the Townhall Comment Forum.<sup>8</sup> The forum will be open for 7 days from August 16, 2021 to August 23, 2021.

This EIA does not address the revisions.

The following are federal OSHA identical and state unique standards and regulations applicable in the construction industry, agriculture industry, public sector maritime industry,<sup>9</sup> and general industry<sup>10</sup> that can be used in certain situations to address COVID-19 hazards in the workplace:

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<sup>4</sup> [https://www.governor.virginia.gov/media/governorvirginiagov/executive-actions/EO-79-and-Order-of-Public-Health-Emergency-Ten-Ending-of-Commonsense-Public-Health-Restrictions-Due-to-Novel-Coronavirus\(COVID-19\).pdf](https://www.governor.virginia.gov/media/governorvirginiagov/executive-actions/EO-79-and-Order-of-Public-Health-Emergency-Ten-Ending-of-Commonsense-Public-Health-Restrictions-Due-to-Novel-Coronavirus(COVID-19).pdf)

<sup>5</sup> The Transportation Security Administration on Tuesday extended a federal requirement that travelers [and employees] wear masks on commercial flights, buses and trains through Jan. 18, 2022." Please see:

<https://www.cnbc.com/2021/08/17/biden-administration-set-to-extend-mask-mandate-for-travel-through-mid-january.html>.

<https://www.tsa.gov/news/press/releases/2021/04/30/tsa-extends-face-mask-requirement-airports-and-throughout>

<sup>6</sup> <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html>

<sup>7</sup> <https://www.doli.virginia.gov/wpcontent/uploads/2021/07/Summary-of-Governor-Northams-Review-of-Proposed-Amendmentsto-16VAC25-220-7.1.2021.pdf>

<sup>8</sup> <https://townhall.virginia.gov/L/ViewNotice.cfm?GNid=130>

<sup>9</sup> VOSH standards and regulations only apply to public sector maritime employers and employees. OSHA retains jurisdiction over private sector maritime employers and employees in Virginia.

<sup>10</sup> General industry covers all employers not otherwise classified as construction, agriculture, or maritime.

### **Occupational Exposure to COVID-19, Emergency Temporary Standard, 1910.502, et seq.**

On June 21, 2021, OSHA issued an emergency temporary standard to protect healthcare and healthcare support service workers from occupational exposure to COVID-19 in settings where people with COVID-19 are reasonably expected to be present.

On June 29, 2021, the Virginia Safety and Health Codes Board adopted the federal COVID-19 Emergency Temporary Standard, 1910.502, et seq.<sup>11</sup> This standard is in effect in Virginia and is applicable to all settings where any employee provides healthcare services or healthcare support services. The effective date is August 2, 2021. The emergency temporary standard will expire within six months or when repealed by the Board, whichever occurs first.

### **General Industry**

- 1910.132, Personal Protective Equipment in General Industry (including Workplace Assessment)
- 1910.133, Eye and Face Protection in General Industry
- 1910.134, Respiratory Protection in General Industry
- 1910.138, Hand Protection
- 1910.141, Sanitation in General Industry (including Handwashing Facilities)
- 1910.1030, Bloodborne Pathogens in General Industry
- 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories in General Industry

### **Construction Industry**

- 1926.95, Criteria for Personal Protective Equipment in Construction
- 1926.102, Eye and Face Protection in Construction
- 1926.103, Respiratory Protection in Construction
- 16VAC25-160, Sanitation in Construction (including Handwashing Facilities)

### **Agriculture**

- 16VAC25-190, Field Sanitation (including Handwashing Facilities) in Agriculture

### **Public Sector Maritime**

- 1915.152, Shipyard Employment (Personal Protective Equipment)
- 1915.153, Shipyard Employment (Eye and Face Protection)
- 1915.154, Shipyard Employment (Respiratory Protection)
- 1915.157, Shipyard Employment (Hand and Body Protection)
- 1917.127, Marine Terminal Operations (Sanitation)
- 1917.92 and 1917.1(a)(2)(x), Marine Terminal Operations (Respiratory Protection, 1910.134)
- 1917.91, Marine Terminal Operations (Eye and Face Protection)
- 1917.95, Marine Terminal Operations (PPE, Other Protective Measures)
- 1918.95, Longshoring (Sanitation)
- 1918.102, Longshoring (Respiratory Protection)

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<sup>11</sup> Found at <https://townhall.virginia.gov/L/ViewStage.cfm?stageid=9308>.

- 1918.101, Longshoring (Eye and Face Protection)

#### Multiple Industries

- 16VAC25-220, VOSH COVID-19 Standard in General Industry, Construction, Agriculture and Public Sector Maritime
- 1904, Recording and Reporting Occupational Injuries and Illness in General Industry, Construction, Agriculture and Public Sector Maritime
- 1910.142, Temporary Labor Camps (including Handwashing Facilities) in Agriculture and General Industry
- 1910.1020, Access to Employee Exposure and Medical Records in General Industry, Construction, and Public Sector Maritime (excludes Agriculture)
- 1910.1200, Hazard Communication in General Industry, Construction, Agriculture and Public Sector Maritime
- 16VAC25-60-120 (General Industry), 16VAC25-60-130 (Construction Industry), 16VAC25-60-140 (Agriculture), and 16VAC25-60-150 (Public Sector Maritime)
  - The above standards provide that manufacturer's specifications and limitations are applicable to the operation, training, use, installation, inspection, testing, repair and maintenance of all machinery, vehicles, tools, materials and equipment, which can be used to apply to operation and maintenance of air handling systems in accordance with manufacturer's instructions.

In addition, Virginia Code §40.1-51.1.A, provides that:

“It shall be the duty of every employer to furnish to each of his employees safe employment and a place of employment that is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees and to comply with all applicable occupational safety and health rules and regulations promulgated under this title.”

Otherwise known as the “general duty clause” (the Virginia equivalent to §5(a)(1) of the OSH Act of 1970), Va. Code §40.1-51.1.A can be used to address “serious” recognized hazards to which employees of the cited employer are exposed through reference to such things as national consensus standards, manufacturer’s requirements, requirements of the Centers for Disease Control and Prevention (CDC), or an employer’s safety and health rules.

To the extent that the general duty clause could be used by DOLI to address COVID-19 workplace hazards to the same extent as, and in the same manner as the standard (were the standard not in effect), DOLI does not consider any of the costs associated with such use of the clause to be new costs associated with adoption of the standard.

## 2. Employer Categorization

In the amendments to 16VAC25-220, certain mandatory requirements apply to all covered Virginia employers, and additional requirements apply to some employers based on an increased risk of potential exposure associated with the SARS-CoV-2 virus and the COVID-19 disease. In the amendments, workplaces are divided into three risk exposure levels: healthcare services<sup>12</sup> and healthcare support services, higher-risk workplaces, and other.

Healthcare services are provided to individuals by professional healthcare practitioners (e.g., doctors, nurses, emergency medical personnel, and oral health professionals) for the purpose of promoting, maintaining, monitoring, or restoring health. Healthcare services are delivered through various means including: hospitalization, long-term care, ambulatory care, home health and hospice care, emergency medical response, and patient transport. For the purposes of this analysis, healthcare services include autopsies. Healthcare support services facilitate the provision of healthcare. Healthcare support services include patient intake/admissions, patient food services, equipment and facility maintenance, housekeeping, laundry services, medical waste handling, and medical equipment cleaning/reprocessing.

Higher-risk workplaces will have employees who are fully vaccinated employees and those who are not fully vaccinated. In this report, employees who are not fully vaccinated are considered to be “at-risk” employees.<sup>13</sup> Higher-risk workplaces include, but are not limited to: manufacturing, meat and poultry processing, high-volume retail and grocery, transit, seafood processing, correctional facilities, jails, detention centers, and juvenile detention centers. In those workplaces, employees who are not fully vaccinated work close to one another, or have close contact with the general public who may not be fully vaccinated, and thus are considered at-risk.

In this analysis, Chmura classifies Virginia employers into the above categories based on the North America Industry Classification System (NAICS) codes. It is understood that businesses with the same NAICS code may be classified differently. For example, cleaning services for healthcare facilities should be classified as healthcare support services, but those cleaning offices or homes face a lower exposure risk. However, the available data do not allow Chmura to make that distinction. Chmura worked with DOLI to classify different employers into the above three categories.

Chmura uses the latest employment and establishment data to estimate the number of employers that may be affected by the amendments. The latest establishment data were for the year 2020, while the latest employment data were for the four quarters ending with the first quarter of 2021.<sup>14</sup> This economic impact analysis also estimates the number of small businesses—defined as those with fewer than 500 employees or less than \$6 million of annual revenue. The business size data are from the U.S. Census Business Survey for 2019.<sup>15</sup>

Finally, some of the regulations contained in these amendments apply only to the workers who are not fully vaccinated. Chmura uses vaccination rate data from the Virginia Department of Health to estimate the number of unvaccinated employees. As of August 4, 2021, 65.3% of adults (age 18 and older) in Virginia were fully vaccinated.<sup>16</sup> It is likely that there may be differences among workers in different categories of workplaces. It was initially expected that healthcare workers

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<sup>12</sup> In this report, healthcare services are also referred to as healthcare.

<sup>13</sup> For brevity, when this report mentions “at-risk” employees, this refers to employees who are not fully vaccinated.

<sup>14</sup> The affected businesses presented in this report are measured by the number of business establishments, not the number of firms. For example, a bank can have many branches in Virginia, and each branch is a separate establishment. Employment data will be referred to as employment as of the second quarter of 2020.

<sup>15</sup> In this analysis, Chmura only used the number of employees to classify establishments into small business, as revenue information is not available.

<sup>16</sup> Source: Virginia Department of Health, <https://www.vdh.virginia.gov/coronavirus/covid-19-vaccine-summary/>.

may have higher vaccination rates than the general population, as they were the first to be eligible for vaccines. But a recent national study on the healthcare workforce reviewed by Chmura does not provide conclusive evidence. As of July 2021, it was reported that at the national level, vaccination rates among healthcare workers vary greatly: 96% of physicians, 55% of nursing home staff, less than 50% of nurses, and just 26% of home health aides were fully vaccinated.<sup>17</sup> As a whole, those data suggest the overall vaccination rate for healthcare workers is no better than the overall rate for adults in the country, as physicians only account for a small percentage of the healthcare workforce. As a result, Chmura applied the same vaccination rates to all employees in this study.

Table 2.1 presents the estimated number of Virginia business establishments and related employment. In 2020, there were an estimated 289,782 establishments in Virginia, with 45,567 in healthcare or healthcare support services. There were 70,700 establishments classified in the higher-risk category, and the rest were classified as other workplaces. The latest employment data show that there were 4 million workers in Virginia as of the first quarter of 2021, with 454,841 in healthcare or healthcare support services, 1.6 million in higher-risk workplaces, and 1.9 million in other workplaces. Almost all Virginia establishments (99.7%) have fewer than 500 employees, and 75.5% of jobs in Virginia are in small businesses. Finally, an estimated 1.4 million Virginia workers were not fully vaccinated as of early August 2021, and 1.0 million of them work in small businesses.

**Table 2.1: Estimated Virginia Business Establishment and Employment**

Workplace Exposure Risk Level	All Businesses			Small Businesses			Percent of Small Business	
	Establishment (2020)	Employment (Q1-2021)	At-Risk Employees (Q1-2021)	Establishment (2020)	Employment (Q1-2021)	At-Risk Employees (Q1-2021)	Establishment (2020)	Employment (Q1-2021)
Healthcare/ Healthcare Support	45,567	454,841	157,830	45,401	334,233	115,979	99.6%	73.5%
Higher-Risk	70,700	1,592,221	552,501	70,482	1,253,921	435,110	99.7%	78.8%
Other	173,515	1,919,022	665,901	172,967	1,405,320	487,646	99.7%	73.2%
<b>Total</b>	<b>289,782</b>	<b>3,966,084</b>	<b>1,376,231</b>	<b>288,850</b>	<b>2,993,473</b>	<b>1,038,735</b>	<b>99.7%</b>	<b>75.5%</b>

Source: U.S. Census and JobsEQ by Chmura

In estimating the economic impact of the 16VAC25-220 amendments, Chmura focuses on the incremental cost due to these amendments. As stated in Section 1, if certain stipulations contained in these amendments overlap with existing federal or state regulations/requirements, the stipulations will not create an additional cost for affected employers. Chmura worked with DOLI to identify the standards that exceed existing federal and state regulations, thus resulting in incremental costs for Virginia businesses.

The 16VAC25-220 amendments have nine sections, numbered 16VAC25-220-10 to 16VAC25-220-90. The section of 16VAC25-220-10 outlines the purpose, scope, and applicability; 16VAC25-220-20 stipulates the effective date of the standard; and 16VAC25-220-30 defines terminologies used in the amendments. Furthermore, 16VAC25-220-90 states that discrimination against an employee for exercising rights under this standard is prohibited. These four sections do not result in incremental costs for businesses in Virginia and are excluded from this analysis. As a result, the rest of the report will evaluate the economic impact of the five sections, 16VAC25-220-40 to 16VAC25-220-80.

<sup>17</sup> Source: Annals of Internal Medicine, <https://www.acpjournals.org/doi/10.7326/M21-3150>.

## 3. Impact of 16VAC25-220-40

### 3.1. Economic Impact

Section 16VAC25-220-40 outlines the mandatory requirements for all employers in Virginia. There are 13 sections lettered A to M. Under each section, there are additional sub-sections.

Section A states the following. “Employers shall have a policy in place to ensure compliance with the requirements in this section to protect employees from workplace exposure to the SARS-CoV-2 virus that causes the COVID-19 disease. Such policy shall have a method to receive anonymous complaints of violations. Employers shall ensure compliance with the requirements in this section to protect employees in all exposure risk levels from workplace exposure to the SARS-CoV-2 virus that causes the COVID-19 disease.”<sup>18</sup> It is estimated that approximately one to two staff hours may be needed to develop such policies.

Section B is related to exposure assessment, notification requirements, and employee access to exposure and medical records. The current regulations by the federal Occupational Safety and Health Administration (OSHA) have required employers in general industry (excluding construction, agriculture, and maritime industries) to assess workplace hazards.<sup>19</sup> Thus, Section B will not incur additional costs for Virginia businesses except for those in construction, agriculture, and maritime industries. For businesses in those three industries, it is estimated that risk assessment, discussion with sub-contractors, notifying employees, and having a system to report positive COVID-19 cases may take approximately four to five hours of staff time to perform.

Section C is related to the return-to-work policies all businesses need to have regarding sick employees or those possibly infected by the SARS-CoV-2 virus. The key component of Section C is that those infected or thought to be infected are not allowed to return to work, and employers shall provide COVID-19 testing at no cost for employees. While those stipulations may cause businesses to lose potential revenue, the requirements are already in effect under existing CDC guidelines related to return-to-work.<sup>20</sup> The only cost for a business is to develop policies and procedures related to employees. It is estimated that approximately seven to ten hours may be needed to develop such policies. The Virginia Department of Health provides guidelines for this, which could reduce the time needed to develop this plan.<sup>21</sup>

Section D concerns the establishment and implementation of policies and procedures that “ensure employees that are not fully vaccinated and otherwise at-risk employees observe physical distancing while on the job and during paid breaks on the employer’s property.” Employers should use verbal announcements, signage, or visual cues to promote physical distancing. It is estimated that approximately one to two staff hours may be needed to develop such policies. The cost of signs ranges from \$1.80 to \$9.40, for workplace use, depending on the size.<sup>22</sup>

Section E concerns the access to common areas and breakrooms in the workplace for at-risk employees, requiring businesses to limit occupancy of such areas, provide handwashing facilities or supplies, post signage, and to clean and sanitize such areas. The additional cost to businesses includes physical distancing signage, ranging from \$1.80 to \$9.40,

<sup>18</sup> All direct quotes in this document are from: Proposed Amendments to Final Permanent Standard for Infectious Disease Prevention of the SARS-CoV-2 Virus that Causes COVID-19, DOLI, June 29, 2021, unless noted otherwise. The Appendix includes the itemized list of cost estimates.

<sup>19</sup> Source: <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.132>.

<sup>20</sup> Source: [https://www.vdh.virginia.gov/coronavirus/frequently-asked-questions/virginia-questions/#\\_heading=h.3rdcrjn](https://www.vdh.virginia.gov/coronavirus/frequently-asked-questions/virginia-questions/#_heading=h.3rdcrjn).

<sup>21</sup> Source: <https://www.vdh.virginia.gov/coronavirus/vdh-interim-guidance-for-implementing-safety-practices-for-critical-infrastructure-workers-non-healthcare-during-widespread-community-transmission-in-virginia/>.

<sup>22</sup> Source: <https://www.zumaooffice.com/search.aspx?keyword=social+distancing+sign>.

and hand sanitizer, estimated to be around \$5.00 for a 12 to 17-ounce bottle, or \$25 to \$35 per gallon.<sup>23</sup> In addition, professional cleaning services for commercial buildings range from \$50 to \$100 per hour.<sup>24</sup> The requirement of handwashing facilities is covered in existing OSHA and DOLI standards and regulations.

Section F is associated with multiple employees occupying a vehicle for work purposes, if any of them are not fully vaccinated. Employers are required to mitigate the hazards associated with SARS-CoV-2 and COVID-19. Employers should eliminate the need for employees sharing work vehicles, provide access to fresh air ventilation, and provide respiratory protection, such as a filtering respirator. Face coverings should be provided for employees until adequate supplies of respiratory protection and/or personal protective equipment become readily available. It is estimated that the cost of respiratory protection, such as N95 respirators, are available at a cost of \$1.50 per piece for disposables, and \$14.00 per piece for reusables.<sup>25</sup> Face coverings, such as standard disposable masks, cost about \$0.10 per piece when purchased in bulk.<sup>26</sup>

Section G is related to wearing face coverings in indoor workplaces for at-risk employees. In addition, when a face shield is required to comply with the regulation, an employer must ensure that face shields are cleaned daily. Also, employers can provide disposable face shields; prices range from \$0.40 to \$4.00 per piece.<sup>27</sup>

Sections H, J, and K are reserved, and Section I stipulates how a face covering should be worn. There is no incremental cost for employers associated with those sections.

Section L involves workplace sanitation and disinfection standards. While employers shall comply with VOSH standards, this regulation requires prompt cleaning and/or disinfection of workplaces accessed by employees suspected to have COVID-19, or employees who have tested positive for the virus. The cost of professional cleaning services for commercial buildings ranges from \$50 to \$100 per hour. This cleaning requirement does not apply to food agricultural production, manufacturing, or food prepared in food service areas where specific regulations apply. In addition to the requirement of cleaning and disinfecting possibly contaminated areas, all common spaces should be cleaned at least once during or at the end of each shift. Employers should also make available to employees various cleaning products. Examples of those products include hand sanitizer, which costs around \$5.00 for a 12 to 17-ounce bottle, or \$25 to \$35 per gallon; liquid hand soap, ranging from \$12 to \$50 per gallon;<sup>28</sup> and all-purpose cleaning products, between \$20 to \$35 per gallon.<sup>29</sup>

Section M requires employers to provide PPE for employees in situations when “engineering, work practice, and administrative controls are not feasible or do not provide sufficient protection.” Chmura estimates the cost of PPE to outfit

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<sup>23</sup> Source:

[https://www.bulkofficesupply.com/search.aspx?keyword=hand+sanitizer&onatalp=4024471056375168968&fph=0\\_41bfd98c84e3ed86d3746ed1a8c10870](https://www.bulkofficesupply.com/search.aspx?keyword=hand+sanitizer&onatalp=4024471056375168968&fph=0_41bfd98c84e3ed86d3746ed1a8c10870)

<sup>24</sup> Source: <https://desertoasiscleaners.com/commercial-cleaning-cost/>.

<sup>25</sup> Source: <https://www.costco.com/niosh-n95-round-respirator%2c-100-masks.product.100707773.html> and [https://www.amazon.com/3M-Respirator-6300-Respiratory-Protection/dp/B007JZ1MK6/ref=sr\\_1\\_5?dchild=1&keywords=respirator&qid=1626783913&sr=8-5](https://www.amazon.com/3M-Respirator-6300-Respiratory-Protection/dp/B007JZ1MK6/ref=sr_1_5?dchild=1&keywords=respirator&qid=1626783913&sr=8-5).

<sup>26</sup> Source: <https://www.turmerry.com/pages/wholesale-face-mask-usa-suppliers>.

<sup>27</sup> Source: [https://www.amazon.com/Pack-Protective-Face-Shields-Health/dp/B08KT42ST2/ref=zg\\_bs\\_11312309011\\_32?\\_encoding=UTF8&refRID=81Z183PNKBPFTM6B1J72&th=1](https://www.amazon.com/Pack-Protective-Face-Shields-Health/dp/B08KT42ST2/ref=zg_bs_11312309011_32?_encoding=UTF8&refRID=81Z183PNKBPFTM6B1J72&th=1).

<sup>28</sup> Source: <https://www.amazon.com/gallon-hand-soap/s?k=gallon+hand+soap>.

<sup>29</sup> Source: [https://www.amazon.com/Glissen-Chemical-Nu-Foamicide-Disinfectant-Food-Contact/dp/B086339RQS/ref=sr\\_1\\_3?dchild=1&keywords=commercial+disinfecting&qid=1628619803&sr=8-3](https://www.amazon.com/Glissen-Chemical-Nu-Foamicide-Disinfectant-Food-Contact/dp/B086339RQS/ref=sr_1_3?dchild=1&keywords=commercial+disinfecting&qid=1628619803&sr=8-3).

one person is \$4.00. This cost includes disposable gloves at \$0.10 per pair,<sup>30</sup> disposable gowns at \$0.65 per piece,<sup>31</sup> disposable goggles at \$1.70 per piece,<sup>32</sup> and disposable N95 respirators at \$1.50 per piece.

**In summary, 16VAC25-220-40 generates moderate incremental costs for covered businesses in Virginia. One major cost addition is staff hours required to develop policies and procedures related to return-to-work and travel. Another is the cost of cleaning services, cleaning products, hand sanitizer, face coverings, and PPE. For businesses in construction, agriculture, and maritime industries not covered by existing rules, there are additional costs to conduct a risk assessment.**

### 3.2. Businesses and Entities Affected

All covered businesses in Virginia will be affected by 16VAC25-220-40. There are an estimated 289,782 total establishments in 2020, with an employment of 4.0 million as of the first quarter of 2021. Some regulations will only affect at-risk employees. Healthcare services and healthcare support services will not be impacted during the period that the ETS is in effect (45,567 establishments are in healthcare or healthcare support services). It is estimated that 1.4 million Virginia workers are not fully vaccinated as of August 2021. For establishments in construction, agriculture, and maritime industries, it is estimated that there were 23,680 Virginia businesses in these industries in 2020. They employed 277,981 workers as of the first quarter of 2021, with an estimated 96,459 employees who had not been fully vaccinated.

### 3.3. Localities Particularly Affected

Since 16VAC25-220-40 applies to all businesses, no locality will be particularly affected by this proposed regulatory action.

For stipulations that will incur additional costs for construction, agriculture, and maritime industries, some localities in Virginia will be disproportionately affected. As Table 3.1 shows, many are rural counties with a large number of workers in the agriculture industry.

### 3.4. Projected Impact on Employment

The proposed regulations will have a limited impact on overall employment in the state, since the estimated incremental costs are limited. One cost is additional hours that can be accommodated by existing staff without the need to hire additional workers. Other incremental costs are cleaning services, cleaning products, and face

**Table 3.1: Top Ten Virginia Localities with the Highest Percentage of Employment in Construction, Agriculture, and Maritime Industries**

Locality	Percent Employment
Manassas Park City	35.2%
Highland County	34.6%
Charles City County	32.7%
Amelia County	28.9%
Cumberland County	28.8%
Northampton County	23.9%
Rappahannock County	23.1%
Floyd County	22.8%
Powhatan County	22.6%
King and Queen County	21.8%
<b>Virginia</b>	<b>7.0%</b>

Source: JobsEQ by Chmura

<sup>30</sup> Source: [https://www.amazon.com/Examination-100-Count-Disposable-Ultra-Strong-Healthcare/dp/B07KYV178H/ref=sxin\\_12\\_alexas\\_0\\_B07KYV178H?cv\\_ct\\_cx=gloves&dchild=1](https://www.amazon.com/Examination-100-Count-Disposable-Ultra-Strong-Healthcare/dp/B07KYV178H/ref=sxin_12_alexas_0_B07KYV178H?cv_ct_cx=gloves&dchild=1).

<sup>31</sup> Source: [https://www.amazon.com/Disposable-Isolation-Latex-Free-Non-Woven-Industries/dp/B08NFK2463/ref=sr\\_1\\_4?dchild=1&keywords=medical+gowns&qid=1626783382&sr=8-4](https://www.amazon.com/Disposable-Isolation-Latex-Free-Non-Woven-Industries/dp/B08NFK2463/ref=sr_1_4?dchild=1&keywords=medical+gowns&qid=1626783382&sr=8-4).

<sup>32</sup> Source: [https://www.amazon.com/dp/B087D6NLH1/ref=sspa\\_dk\\_detail\\_5?psc=1&pd\\_rd\\_j=B087D6NLH1&pd\\_rd\\_w=sDk1m&pf\\_rd\\_p=887084a2-5c34-4113-a4f8-b7947847c308](https://www.amazon.com/dp/B087D6NLH1/ref=sspa_dk_detail_5?psc=1&pd_rd_j=B087D6NLH1&pd_rd_w=sDk1m&pf_rd_p=887084a2-5c34-4113-a4f8-b7947847c308).

coverings. The products are inexpensive and can be absorbed by businesses, having limited impact on employment.

### 3.5. Small Business Impact

It is estimated that the number of small businesses impacted by 16VAC25-220-40 is 288,850, based on 2020 data. Associated employment was 3.0 million as of the first quarter of 2021. It is estimated that 1.0 million Virginia workers in small businesses are not fully vaccinated. In construction, agriculture, and maritime industries, it is estimated that 23,662 small businesses are impacted based on 2020 data. Total associated employment is 263,885, and 91,568 of these workers were not fully vaccinated as of the first quarter of 2021.

## 4. Impact of 16VAC25-220-50

### 4.1. Economic Impact

16VAC25-220-50 outlines the mandatory requirements for Virginia employers categorized as healthcare services or healthcare support services. There are four sections lettered A to D within this standard, with additional subsections under each section.

On June 21, 2021, the federal OSHA issued an emergency temporary standard (ETS) to protect both healthcare and healthcare support service workers from occupational exposure to COVID-19 in settings where people with COVID-19 are reasonably expected to be present.<sup>33</sup>

On June 29, 2021, the Virginia Safety and Health Codes Board (Board) adopted the federal COVID-19 Emergency Temporary Standard, 1910.502, et seq. It is applicable to all settings where any employee provides healthcare services or healthcare support services. The effective date is August 2, 2021, and shall expire within six months or when repealed by the Board, whichever occurs first.

In its motion to adopt the ETS, the Virginia Safety and Health Codes Board also accepted the recommendation of the Virginia Department of Labor and Industry that:<sup>34</sup>

1. Application of Virginia's 16VAC-25-220, except for 16VAC-25-220-40 B.7.d and e, and 16VAC25-220-90, to such covered employers and employees subject to the standard shall be suspended while the federal COVID-19 Emergency Temporary Standard remains in effect.
2. Should the federal COVID-19 Emergency Temporary Standard, 1910.502, et seq., applicable to settings where any employee provides healthcare services or healthcare support services be later stayed or invalidated by a state or federal court, the provisions of Virginia's 16VAC25-220, Final Permanent Standard for Infectious Disease Prevention of the SARS-CoV-2 Virus That Causes COVID-19, including 16VAC25-220-50, shall immediately apply to such employers and employees in its place with no further action of the Board required.
3. Should the federal COVID-19 Emergency Temporary Standard, 1910.502, et seq., applicable to all settings where any employee provides healthcare services or healthcare support services be later stayed by federal OSHA, or otherwise revoked, repealed, declared unenforceable, or permitted to expire, the provisions of Virginia's 16VAC25-220, Final Permanent Standard for Infectious Disease Prevention of the SARS-CoV-2 Virus That Causes COVID-19, including 16VAC25-220-50, shall immediately apply to such employers and employees in its place with no further action of the Board required. In addition, the Virginia Safety and Health Codes Board shall, within 30 days notice, conduct a regular, special, or emergency meeting to determine whether there is a continued need for Virginia's 16VAC25-220, Final Permanent Standard for Infectious Disease Prevention of the SARS-CoV-2 Virus That Causes COVID-19, or whether it should be maintained, modified, or revoked.

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<sup>33</sup> For federal OSHA materials, see COVID-19 Healthcare ETS Outreach.

<sup>34</sup> To access the final rule see Occupational Exposure to COVID—19; Emergency Temporary Standard, Interim Final Rule. For more information on the regulatory process followed regarding the adoption of the rule, please visit the Virginia Regulatory Town Hall.

In summary, 16VAC25-220-50 will not incur additional costs for employers in healthcare and healthcare support service, because the 16VAC25-220, except for 16VAC-25-220-40 B.7.d and e, and 16VAC25-220-90, is suspended while the federal OSHA emergency temporary standard is in effect.

#### 4.2. Businesses and Entities Affected

In Virginia, it is estimated that 45,567 establishments in 2020 were in healthcare and healthcare support services, with employment of 454,841 as of the first quarter of 2021.

#### 4.3. Localities Particularly Affected

In Virginia, an estimated 11.5% of all jobs are in healthcare and healthcare support services. However, in some localities, those percentages are significantly higher. Many of these localities have a high concentration of healthcare or nursing home facilities, such as Petersburg City, Winchester City, and Charlottesville City.

#### 4.4. Projected Impact on Employment

There will be no impact on the overall employment in the state. The proposed regulations are currently suspended as long as the federal ETS is in effect.

#### 4.5. Small Business Impact

It is estimated that the number of small businesses in healthcare and healthcare support is 45,401, based on 2020 data. Associated employment is 334,233 as of the first quarter of 2021.

**Table 4.1: Top Ten Virginia Localities with the Highest Percentage of Employment in Healthcare and Healthcare Support**

Locality	Percent Employment
Petersburg City	31.6%
Winchester City	28.9%
Charlottesville City	27.9%
Norton City	27.5%
Franklin City	25.5%
Emporia City	25.2%
Alleghany County	24.8%
Fredericksburg City	24.4%
Galax City	24.3%
Martinsville City	23.3%
<b>Virginia State Average</b>	<b>11.5%</b>

Source: JobsEQ by Chmura

## 5. Impact of 16VAC25-220-60

### 5.1. Economic Impact

16VAC25-220-60 outlines the requirements for employers having higher-risk workplaces with mixed-vaccination-status employees. There are four sections lettered A to D. Section A defines the applicable businesses for 16VAC25-220-60 and lists various factors that may increase the risks of COVID-19. This section poses no incremental cost to employers.

#### 5.1.1. Section B

Section B.1 is related to the engineering controls for businesses with higher-risk workplaces with mixed-vaccination-status employees. Specifically, subsection B.1 states that air-handling systems under the control of those businesses need to meet manufacturing instructions and additional operating instructions specific to the SARS-CoV-2 virus. Preexisting Virginia Occupational Safety and Health (VOSH) regulations already require that employers comply with "the manufacturer's specifications and limitations applicable to the operation, training, use, installation, inspection, testing, repair and maintenance of all machinery, vehicles, tools, materials and equipment."<sup>35</sup> It is estimated that subsection B.1 will not generate incremental costs for businesses.<sup>36</sup>

Subsection B.2 states that where feasible, "employers shall install physical barriers, (such as plexiglass shields), for employees who are not vaccinated and otherwise at-risk employees, where such barriers will aid in mitigating the spread of SARS-CoV-2 and COVID-19 virus transmission." Similarly, subsection B.3 also requires that for workplaces with process and assembly lines (and employees who may not be fully vaccinated), employers should ensure proper spacing or use physical barriers when necessary. The cost of a physical barrier ranges from \$15 to \$300, depending on the size.<sup>37</sup> In addition, if other mitigation strategies are implemented in higher-risk workplaces, this requirement is optional for businesses and may not result in incremental costs.

#### 5.1.2. Section C

Section C concerns administrative and work practice control of employers with higher-risk workplaces and mixed-vaccination-status employees. Subsection C.1.a requires pre-screening or surveying of employees before the commencement of each work shift. Affected businesses will develop certain screening methods and devote staff hours to perform the screening. Guidelines from the Virginia Department of Health for screening includes temperature checks and screening questions.<sup>38</sup> It is estimated that the cost of a digital non-contact thermometer ranges from \$14 to \$80.<sup>39</sup> However, please note that although it is a generally accepted practice, the standard does not specifically require that employers check the temperatures of employees. Businesses need to have dedicated staff to perform screenings. It is estimated that screening each employee may take two to five minutes.

<sup>35</sup> Source: 16VAC25-60-120 [General Industry], <https://law.lis.virginia.gov/admincode/title16/agency25/chapter60/section120/>.

<sup>36</sup> DOLI states that the air handling provisions in the VOSH Standard were specifically reviewed by the Virginia Department of Housing and Community Development (DHCD) and found to be consistent with Virginia Statewide Building Code requirements.

<sup>37</sup> Source: <https://www.zumaoffice.com/search.aspx?keyword=physical+barriers>; <https://www.dgsretail.com/P1711/Portable-Freestanding-Sneeze-Guard-Desk-Countertops-Acrylic-W/Base-24x24H>.

<sup>38</sup> Source: <https://www.vdh.virginia.gov/coronavirus/vdh-interim-guidance-for-implementing-safety-practices-for-critical-infrastructure-workers-non-healthcare-during-widespread-community-transmission-in-virginia/>.

<sup>39</sup> Source: <https://www.zumaoffice.com/search.aspx?keyword=thermometer>.

Subsection C.2 requires that “employers shall provide face coverings to suspected COVID-19 non-employees to contain respiratory secretions until the non-employees are able to leave the site.” Face coverings, such as standard disposable masks, cost about \$0.10 per piece when purchased in bulk.

Subsection C.3 requires employers to stagger break times, while Section C.4 requires employers to stagger employees’ arrival and departure times, to avoid congregating during breaks or in parking areas. Section C.5 states that employers shall implement flexible work hours (staggered shifts). Those measures pose no incremental costs for businesses.

Subsection C.6 requires employers to provide visual cues (floor markers or signs) as a reminder to maintain physical distancing. The additional cost to businesses includes physical distancing signage, which range from \$1.80 to \$9.40, and floor markers, at \$0.60 per piece.<sup>40</sup>

Subsection C.7 stipulates the requirement for retail workspaces where there are at-risk employees. Those measures include signage requesting face coverings, requiring physical distance, installing barriers when physical distancing is not feasible, moving electronic payment terminals away from at-risk employees, and shifting stocking activities to off-peak hours. Those requirements only apply to at-risk employees. Expenses for retail businesses are signs encouraging masks (\$1.80 to \$9.40 per sign), and floor markers (\$0.60 per piece).<sup>41</sup> The cost of a physical barrier ranges from \$15 to \$300, depending on the size.<sup>42</sup> Other requirements such as moving cash registers or changing stocking hours can be accomplished by adjusting current staff hours. These will not create new costs for retail businesses.

Subsections C.8 and C.9 require businesses to deliver services remotely and deliver products through curbside pick-up. Those requirements will not pose new costs for businesses and can be accomplished using current staff and contractors. Some measures, such as delivering services remotely, may even provide cost savings for businesses.

### 5.1.3. Section D

Section D is related to personal protective equipment (PPE) in the higher-risk workplace. It requires employers to assess hazardous risks, complete a written certification, and select PPE for at-risk employees. The current regulations by the Occupational Safety and Health Administration (OSHA) have required employers in general industry (excluding construction, agriculture, and maritime industries) to assess workplace hazards.<sup>43</sup> For businesses in those three industries, it is estimated that risk assessment and certification may take approximately four to five staff hours. Chmura estimates the cost of PPE to outfit one person is around \$4.00, including disposable gloves at \$0.10 per pair, disposable gowns at \$0.65 per piece, disposable goggles at \$1.70 per piece, and disposable N95 respirators at \$1.50 per piece.

**In summary, 16VAC25-220-60 will incur limited incremental costs for employers at higher-risk workplaces with mixed-vaccination-status employees. Most of those costs are related to administrative controls, such as conducting screenings, installing physical barriers, and providing PPE for those not fully vaccinated. However, businesses can mitigate these costs by adopting more flexible worksites and shift arrangements.**

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<sup>40</sup> Source: [https://www.amazon.com/Social-Distancing-Floor-Decal-Stickers/dp/B089KCQHQL/ref=sr\\_1\\_8?dchild=1&keywords=social+distancing+signs&qid=1626877296&sr=8-8](https://www.amazon.com/Social-Distancing-Floor-Decal-Stickers/dp/B089KCQHQL/ref=sr_1_8?dchild=1&keywords=social+distancing+signs&qid=1626877296&sr=8-8).

<sup>41</sup> Ibid.

<sup>42</sup> Source: <https://www.zumaoffice.com/search.aspx?keyword=physical+barriers>; <https://www.dgsretail.com/P1711/Portable-Freestanding-Sneeze-Guard-Desk-Countertops-Acrylic-W/Base-24x24H>.

<sup>43</sup> Source: <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.132>.

## 5.2. Businesses and Entities Affected

In Virginia, it is estimated that 70,700 establishments in 2020 were higher-risk workplaces with mixed-vaccination-status employees. They employed 1.6 million workers as of the first quarter of 2021, with an estimated 552,501 employees who were not fully vaccinated. This section has some specific requirements for retail businesses. In Virginia, it is estimated that 25,309 establishments in 2020 were in retail businesses. They employed 401,227 workers as of the first quarter of 2021, with an estimated 139,226 who were not fully vaccinated.

## 5.3. Localities Particularly Affected

In Virginia, an estimated 40.1% of all jobs are in higher-risk workplaces. In some localities, a high percentage of employees work for those businesses. As Table 5.1 shows, examples of those localities are Williamsburg City, Radford City, and Pulaski County. On average, 10.1% of Virginia employees are in retail, and localities such as Colonial Heights City, Franklin City, and Madison County have the highest percentage of local employment in retail businesses.

**Table 5.1: Top Ten Virginia Localities with Employees in Higher-Risk Workplaces**

Locality	Percent of Employees at Higher-Risk Workplaces	Locality	Percent of Employees in Retail
Williamsburg City	67.7%	Colonial Heights City	26.3%
Radford City	67.3%	Franklin City	21.5%
Pulaski County	65.4%	Madison County	21.1%
Greensville County	64.6%	Waynesboro City	20.4%
Henry County	64.2%	Essex County	20.4%
Montgomery County	63.6%	Greene County	20.0%
Harrisonburg City	63.0%	Rockbridge County	19.4%
Covington City	62.0%	Appomattox County	19.3%
Dinwiddie County	61.4%	Gloucester County	19.2%
Isle of Wight County	60.7%	Norton City	18.7%
<b>Virginia State Average</b>	<b>40.1%</b>	<b>Virginia State Average</b>	<b>10.1%</b>

Source: JobsEQ by Chmura

## 5.4. Projected Impact on Employment

The proposed standard will have a limited impact on overall employment in the state. Since the estimated incremental costs are not substantial, it is unlikely that any of the affected businesses will need to reduce staff size to meet those requirements. However, it will have a positive effect on businesses supplying products such as face masks and physical barriers.

## 5.5. Small Business Impact

The number of small businesses impacted by the requirement is 70,482, based on the 2020 establishment estimate. As of the first quarter of 2021, associated employment was 1.3 million. Among those employees, 435,710 were not fully vaccinated. It is estimated that 25,297 retail establishments in 2020 were small businesses. They employed 391,218 workers as of the first quarter of 2021, and an estimated 135,752 of those employees were not fully vaccinated.

## 6. Impact of 16VAC25-220-70

### 6.1. Economic Impact

16VAC25-220-70 is related to the development of a written Infectious Disease Preparedness and Response Plan. It only applies to employers in healthcare and healthcare support services, as well as employers with higher-risk workplaces and 11 or more employees who are not fully vaccinated. Subsections A and B stipulate the classification level of employers required to have this plan, which will not result in additional costs for businesses.

NOTE: Healthcare services and healthcare support services will not be impacted by 16VAC25-220-70 during the period that the ETS is in effect (45,567 establishments are in healthcare or healthcare support services).

Subsection C provides details related to the components of such a plan. Employers should designate a person responsible for the plan. Other components of the plan include identifying sources that expose employees at work, an employee's individual risk factor, contingency plans if a virus outbreak occurs, and identifying infection prevention measures. It is estimated that risk assessment and implementation of an infectious disease preparedness and response plan may take approximately 10 to 20 hours of staff time to develop. To mitigate such costs to businesses, the Virginia Occupational Safety and Health Program has provided a free online WORD template of an infectious disease preparedness and response plan that can be used by employers to satisfy the requirements of 16VAC25-220-70. This template can significantly reduce the cost for businesses.<sup>44</sup>

### 6.2. Businesses and Entities Affected

The proposed regulations will affect healthcare and healthcare support services employers, and those with higher-risk workplaces having 11 or more unvaccinated employees. It is estimated that the number of establishments in this category was 57,368 in 2020, with an employment of 1.6 million as of the first quarter of 2021.

### 6.3. Localities Particularly Affected

In Virginia, an estimated 39.3% of all employees are in the affected business category. Some localities have a higher percentage of employees in affected businesses. As Table 6.1 shows, examples of those localities are Emporia City, Galax City, and Williamsburg City.

### 6.4. Projected Impact on Employment

The proposed regulations will have no impact on overall state employment. The only incremental cost is additional hours, which can be accommodated by existing staff. Businesses will have no need to hire additional workers.

**Table 6.1: Top Ten Virginia Localities with the Highest Percentage of Affected Employment**

Locality	Percent of Affected Employment
Emporia City	62.5%
Galax City	62.1%
Williamsburg City	59.5%
Winchester City	59.5%
Danville City	58.5%
Petersburg City	57.0%
Norton City	56.8%
Greensville County	56.5%
Colonial Heights City	56.3%
Smyth County	56.2%
<b>Virginia State Average</b>	<b>39.3%</b>

Source: JobsEQ by Chmura

<sup>44</sup> Source: <https://www.doli.virginia.gov/covid-19-outreach-education-and-training/>.

## 6.5. Small Business Impact

It is estimated that the number of impacted small businesses is 57,098, based on the 2020 establishment estimate. Associated employment was 1.2 million as of the first quarter of 2021.

## 7. Impact of 16VAC25-220-80

### 7.1. Economic Impact

16VAC25-220-80 is related to providing employees with training on the hazards and characteristics of the SARS-CoV-2 and COVID-19 disease. Subsection A identifies employers which are required to provide training for their employees. The training requirement only applies to healthcare and healthcare support employers; and for higher-risk workplaces, training is required only for at-risk employees. For fully vaccinated employees, written information can be provided in lieu of training.

NOTE: Healthcare services and healthcare support services will not be impacted by 16VAC25-220-80 during the period that the ETS is in effect (45,567 establishments are in healthcare or healthcare support services).

Section B outlines information that should be covered in the training, and Section C requires that employers in healthcare and healthcare support services should maintain certification records for employees completing the training. Typically, development of material takes about 40 hours of staff time for a one-hour training course.<sup>45</sup> Delivering the training and maintaining training certifications will also require staff hours in human resources or management. To mitigate costs to businesses, VOSH has provided free online training materials that satisfy the requirements of 16VAC25-220-80. In addition, VOSH has provided a free online training certification form for employers to use.<sup>46</sup> As a result, employers may not need to develop new training materials, and all business costs are related to training each employee (about an hour) and staff time to maintain the certifications.

Other employers need to provide written or oral information to their employees (Sections E and F). The Virginia Department of Labor and Industry will develop an information sheet for employees to distribute. As a result, the cost to other affected businesses is minimal.

### 7.2. Businesses and Entities Affected

Overall, 16VAC25-220-80 will affect all businesses in Virginia, but the responsibility varies based on business categorization. The training requirement is for all employees in healthcare and healthcare support businesses, and for at-risk employees in higher-risk workplaces. Chmura estimates that there are 116,267 businesses in those two categories, with 1.0 million employees needing training. It is estimated that about 1.0 million fully vaccinated employees in higher-risk workplaces need to be provided with an information sheet. There were 173,515 other businesses in Virginia, with 1.9 million employees, who will need to be provided with an information sheet.

### 7.3. Localities Particularly Affected

Since 16VAC25-220-80 applies to all businesses, no locality will be particularly affected by this proposed regulatory action. However, for training requirements, since it only applies to healthcare, healthcare support services, and higher-risk workplaces, some localities affected the most include Williamsburg City, Emporia City, and Galax City. For other businesses without a training requirement, localities with high percentages of employment are Goochland County, King George County, and Surry County (Table 7.1).

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<sup>45</sup> Source: <https://trainlikeachampion.blog/why-does-it-matter-how-long-it-takes-to-design-a-presentation/>.

<sup>46</sup> Source: <https://www.doli.virginia.gov/wp-content/uploads/2020/08/ETS-Full-Training-Presentation.pdf>; <https://www.doli.virginia.gov/wp-content/uploads/2020/08/ETS-Abbreviated-Training-Presentation.pdf>; <https://www.doli.virginia.gov/wp-content/uploads/2020/07/Infographic.pdf>; and <http://www.doli.virginia.gov/wp-content/uploads/2020/07/Training-Certification.xlsx>.

NOTE: Local government healthcare services and healthcare support services will not be impacted by 16VAC25-220-80 during the period that the ETS is in effect.

**Table 7.1: Top Ten Virginia Localities with the Highest Percentage of Affected Businesses**

Locality	Percent of Employment in Healthcare / Support / Higher-Risk Workplaces	Locality	Percent of Employment in Other Businesses
Williamsburg City	80.2%	Goochland County	77.1%
Emporia City	78.9%	King George County	76.2%
Galax City	78.7%	Surry County	74.8%
Greensville County	76.2%	Manassas Park City	70.1%
Danville City	75.0%	Arlington County	67.8%
Pulaski County	74.9%	Charles City County	63.9%
Colonial Heights City	73.8%	Fairfax County	63.1%
Montgomery County	73.8%	Alexandria City	62.4%
Smyth County	73.6%	Highland County	61.7%
Henry County	73.5%	King and Queen County	56.2%
<b>Virginia State Average</b>	<b>51.6%</b>	<b>Virginia State Average</b>	<b>48.4%</b>

Source: JobsEQ by Chmura

#### 7.4. Projected Impact on Employment

The proposed regulations will have no impact on overall state employment. Since the estimated incremental costs are minimal, those efforts can be accommodated by existing staff without the need to hire additional workers.

#### 7.5. Small Business Impacts

Overall, 16VAC25-220-80 will affect all small businesses in Virginia, but training requirements are for all employees in healthcare, healthcare support businesses, and at-risk employees in higher-risk workplaces. Chmura estimates that there are 115,883 small businesses in those categories, with an estimated 769,344 employees needing training. It is estimated that about 818,810 million fully vaccinated employees of small businesses with higher-risk workplaces need to be provided with an information sheet. For other businesses, 172,967 are small businesses in Virginia, with 1.4 million employees, who will need to be provided with an information sheet.

## Appendix: Summary Table of Impact

Table A1: Economic Impact Summary

Stand ard	Description	Included in the Study	Estimated Cost
<b>16VA C25- 220-40</b>	<b>All Businesses</b>		
A	Have a policy to ensure compliance	Staff hours	1-2 hours
B	Exposure assessment (8 items)	Overlap with current regulations, with exception of construction, agriculture, and maritime industries	4-5 hours for construction, agriculture, and maritime businesses
C	Develop return-to-work policy	Staff hours	7-10 hours
	Not allow infected individuals to work (10-20 days)	Overlap with current regulations	
	Provide COVID-19 test	Overlap with current regulations	
D	Develop social distancing policies	Staff hours, signage	1-2 hours
	Use signage	Cost of signs	\$1.80-\$9.40 per sign
E	Post signage in common spaces	Cost of signs	\$1.80-\$9.40 per sign
	Clean and disinfect common areas	Cost of cleaning services	\$50-\$100 per hour for commercial cleaning
	Handwashing facilities	Overlap with current regulations	
	Handwashing supplies	Cost of hand sanitizer and soap	\$5 per bottle (12-17 ounces) or \$25-\$35 per gallon for hand sanitizer; \$12-\$50 per gallon for liquid hand soap
F	Provide N95 respiratory protection	Cost of N95 respirators	\$1.50 per piece (disposable); \$14.00 per piece (reusable)
	Provide face coverings when respirators are not available	Cost of face coverings	\$0.10-\$0.90 per unit (disposable); \$0.50-\$3.00 (reusable)
G	Provide face coverings	Cost of face coverings	\$0.10-\$0.90 per unit (disposable); \$0.50-\$3.00 (reusable)
	Face shields in certain circumstances	Cost of face shields	\$0.40-\$4.00 (disposable); \$1.50-\$8.00 (reusable)
H	Reserved	N/A	
I	Correct ways to wear face coverings	N/A	
J	Reserved	N/A	
K	Reserved	N/A	
L	Cleaning and disinfection	Cost of cleaning services	\$50-\$100 per hour for commercial cleaning
	Cleaning and disinfecting products available	Cost of cleaning and disinfecting products	\$20-\$35 per gallon for all-purpose cleaning products
	Access to soap and water, and hand sanitizer	Cost of soap and hand sanitizer	\$5 per bottle (12-17 ounces) or \$25-\$35 per gallon for hand sanitizer; \$12-\$50 per gallon for liquid hand soap
	Provide mobile crews with hand sanitizer	Cost of hand sanitizer	\$5 per bottle (12-17 ounces) or \$25-\$35 per gallon
	Ensure protective measures are in place	N/A	
M	Provide PPE	Cost of PPE	\$0.10 per pair for disposable gloves; \$0.65 per piece for disposable gowns; \$1.70 per piece for disposable goggles; \$1.50 per piece for disposable N95 respirators
<b>16VA C25- 220-50</b>	<b>Healthcare Services and Healthcare Support Services</b>		
	Suspended, following federal OSHA ETS	N/A	

Table A1: Economic Impact Summary

Stand ard	Description	Included in the Study	Estimated Cost
<b>16VA C25- 220-60</b>	<b>Higher-risk Workplaces</b>		
A	Definition	N/A	
B	Air handling system (B.1)	Overlap with current regulations	
	Install physical barriers (B.2)	Cost of physical barriers	\$15-\$300 per unit
	Ensure proper spacing, use physical barriers if necessary (B.3)	Cost of physical barriers	\$15-\$300 per unit
C	Screening employees for symptoms (C.1)	Cost of screening methods	\$14-\$80 per thermometer, staff hours of 2-5 minutes per employee
	Face coverings to non-employees (C.2)	Cost of face coverings	\$0.10-\$0.90 per unit (disposable); \$0.50-\$3.00 (reusable)
	Stagger break times (C.3)	N/A	
	Stagger arrival and departure times (C4)	N/A	
	Flexible work hours (C.5)	N/A	
	Visual cues for social distancing (C.6)	Cost of signs or floor markers	\$1.80-\$9.40 per sign; \$0.50 per piece for floor markers
	Retail settings (C7a, C7b)	Cost of signs/physical barriers	\$15-\$300 per unit for physical barrier, \$1.80-\$9.40 per sign
	Moving cash register, non-peak stocking hours (C7c, C7d)	N/A	
	Deliver services remotely (C8)	Cost savings for business	
	Deliver products using curbside pickup	N/A	
D	Hazard assessment & certification (D1 & D2)	Staff hours	4-5 hours staff time
	Select PPE (D1)	Cost of PPE	\$0.10 per pair for disposable gloves; \$0.65 per piece for disposable gowns; \$1.70 per piece for disposable goggles; \$1.50 per piece for disposable N95 respirators
	Other requirements (D3.D4)	N/A	
<b>16VA C25- 220-70</b>	Develop preparedness and response plan	Staff hours	10-20 hours
<b>16VA C25- 220-80</b>	Training & certification (B, C, D)	Staff hours	About one hour for each employee
	Information sheet (E, F)	Staff hours	Minimal

Source: Chmura