

**Wisconsin State Disaster Medical Advisory Committee  
Vaccine Distribution Subcommittee  
Recommendations for the Wisconsin Department of Health Services for COVID-19  
Vaccine Priority Group 1b**

The Vaccine Distribution Subcommittee (“Subcommittee”) of the State Disaster Medical Advisory Committee (SDMAC) was established to develop guidance for the Department of Health Services (DHS) regarding allocation of limited numbers of vaccine doses during the COVID-19 pandemic. Current supplies of vaccine limit the ability to provide vaccine to all who wish to be vaccinated; therefore, rationing of available vaccine will be necessary until production and distribution increases to amounts sufficient to meet all needs.

The Subcommittee’s prior guidance on Phase 1a priority groups included health care personnel (as they are critical to the COVID-19 response) and residents of long term care facilities (as they have sustained 27% of the deaths in the pandemic).<sup>1</sup> While these populations are increasingly vaccinated, DHS continues to have constrained vaccine supply. DHS continues to seek partnerships with vaccinating entities to ensure rapid administration of doses to residents of Wisconsin.

Due to the potential large size of the population identified for *possible* 1b prioritization by Advisory Committee on Immunization Practice (ACIP), the Subcommittee was tasked with answering the following question:

“What prioritization scheme should the state set for providers until a vaccine becomes widely available? Which group or groups of individuals should be given priority in a phased approach?”

In accordance with the Subcommittee’s charge, the Subcommittee reviewed the ACIP guidelines,<sup>2</sup> the National Academies of Science and Medicine (NASM),<sup>3</sup> and the Wisconsin State Disaster Medical Advisory Committee Ethics Subcommittee Ethical Framework to Guide the Allocation of COVID-19 Therapeutics and Vaccines.<sup>4</sup>

**AGE: The Subcommittee recommends the following group for inclusion in the Phase 1b based on age alone.**

**People above 70 years of age.** In accordance with discussions at ACIP, the Subcommittee accepts their guidance that age is a good proxy for medical fragility. This is supported by the evidence of deaths in that group in Wisconsin, where 71% of deaths and hospitalization are in those 70 and above. (Appendix A – estimated Wisconsin population size **682,451**).

**CONGREGATE LIVING: Facility staff and residents of congregate settings** should be considered for high prioritization due to their risk and inability to mitigate the risk through social distancing measures. Support for inclusion of congregate settings is provided in ACIP guidance (Appendix B – estimated Wisconsin population size – **117,000**).

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<sup>1</sup> Wisconsin Department of Health Services. <https://www.dhs.wisconsin.gov/covid-19/deaths.htm#housing>. Accessed 1/5/2020.

<sup>2</sup> Centers for Disease Control and Prevention. *Evidence Table for COVID-19 Vaccines Allocation in Phases 1b and 1c of the Vaccination Program*. <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/covid-19/evidence-table-phase-1b-1c.html>. Accessed January 9, 2021

<sup>3</sup> National Academies of Sciences, Engineering and Medicine. *A Framework for Equitable Allocation of Vaccine for the Novel Coronavirus*. <https://www.nap.edu/catalog/25914/discussion-draft-of-the-preliminary-framework-for-equitable-allocation-of-covid-19-vaccine>

<sup>4</sup> Department of Health Services. *Wisconsin State Disaster Medical Advisory Committee Ethics Subcommittee Ethical Framework to Guide the Allocation of COVID-19 Therapeutics and Vaccines*. <https://www.dhs.wisconsin.gov/publications/p02864.pdf>. Accessed December 1, 2020

**PUBLIC-FACING ESSENTIAL WORKERS:** The Subcommittee asks the public and employers to only select those who are at risk due to performing public-facing positions with considerations of frequency, intensity, and duration of contact, and ability to mitigate. Employees who are able to work from home, perform most tasks outdoors, or have limited engagement with the public are asked to delay vaccination until supply is robust. The Subcommittee acknowledges that most of the following populations are unlikely to have high percentages of staff who are able to adequately mitigate the risk of SARS-CoV-2. In addition, the large population that met the ACIP definition of “front line essential worker” necessitated further clarification of this group in order to avoid inappropriately delaying vaccine access for other high-priority groups (e.g. those with high risk co-morbid conditions).

**The Subcommittee recommends inclusion of the following groups as front line essential workers,** based on the essential nature of their jobs, difficulty identifying trained replacements, or unique circumstances of employment:

**Non-EMS First Responders:** The Subcommittee endorses ACIP recommendation to prioritize first responders (e.g. fire, police) and recognizes the critical function that these individuals play in their community. In addition, specialized training makes these groups difficult to replace should they experience morbidity or mortality related to COVID-19. Finally, the feasibility of identifying and vaccinating these groups was identified as high by the Subcommittee (Appendix C - estimated Wisconsin population size **27,880**).

**Education and childcare:** The Subcommittee endorses ACIP recommendation that those serving in daycare, preschool, K-12, and higher education. The feasibility domain was rated high by the Subcommittee as educational settings likely have a relationship with an insurer, school nurse, or health facility that may be able to facilitate enrollment of a vaccine (Appendix D - estimated Wisconsin population size **160,000** educators required for face to face learning).

**Non-frontline health care personnel:** Additional staff who perform essential roles within healthcare organizations by maintaining cyber security, perform cleaning functions, scheduling, and management of care organizations should be prioritized to enable a resumption of normal health care activities (Appendix E - estimated Wisconsin population size **25,000**).

**Mink Husbandry:** International outbreaks associated with mink husbandry have resulted in genomic changes of the SARS-CoV-2 virus. These changes are concerning and pose a biosecurity risk for the current vaccine campaign. Vaccine should be prioritized for this group to reduce possible mink variants of the virus that could result in spike-protein changes (Appendix F - estimated Wisconsin population size **300**).

**The Subcommittee recommends the below considerations if vaccine supply is constrained such that additional sub-prioritization is necessary:**

Individual demographic characteristics and medical conditions have been identified that place individuals at higher risk of severe illness from COVID-19 infection.<sup>5,6</sup> As such, vaccinating entities *should* consider using these factors if additional sub-prioritization is necessary. Of note, logistics may necessitate sub-prioritization to occur only at the level of adequately large population cohorts.

**Demographic**

Age 65+<sup>7</sup>  
Black, Latinx, Native American  
Socioeconomic vulnerability

**Medical Conditions**

Asthma  
Cancer (active)  
Chronic kidney disease  
Chronic lung disease, such as chronic obstructive pulmonary disease (COPD)  
Chronic metabolic disease  
Diabetes  
Heart conditions, such as cardiovascular disease, heart failure, coronary artery disease, or cardiomyopathies  
Hypertension  
Immunocompromised conditions  
Solid organ transplant resulting in immunocompromised state  
Obesity (Body Mass Index (BMI) of 30 kg/m<sup>2</sup> or higher)  
Sickle cell disease  
Smoking  
Intellectual or developmental disability<sup>8</sup>  
Pregnancy

In addition, vaccinating entities may choose to implement lottery systems and/or first come/first served options. Regardless of specific approach, the Subcommittee encourages the prioritization scheme to be clear and transparent and attempt to reduce (rather than reinforce) inequities whenever possible.

**Of note, vaccination does not negate the need for continual adherence to best practices of distancing, masking, hand-hygiene, testing, isolation and quarantining.**

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<sup>5</sup> Centers for Disease Control and Prevention. *People with Certain Medical Conditions*. <https://www.cdc.gov/coronavirus/2019-ncov/ne.ed-extra-precautions/people-with-medical-conditions.html>. Accessed January 9, 2021

<sup>6</sup> Kambhampati AK, O'Halloran AC, Whitaker M, et al. *COVID-19–Associated Hospitalizations Among Health Care Personnel — COVID-NET, 13 States, March 1–May 31, 2020*. *MMWR Morb Mortal Wkly Rep* 2020;69:1576–1583. DOI: <http://dx.doi.org/10.15585/mmwr.mm6943e3>

<sup>7</sup> Self WH, Tenforde MW, Stubblefield WB, et al. *Seroprevalence of SARS-CoV-2 Among Frontline Health Care Personnel in a Multistate Hospital Network — 13 Academic Medical Centers, April–June 2020*. *MMWR Morb Mortal Wkly Rep* 2020;69:1221–1226.

<sup>8</sup> A FAIR Health, West Health Institute and Marty Makary, MD, MPH. (2020). *Risk Factors for COVID-19 Mortality among Privately Insured Patients*. New York, New York: FAIR Health 2020.

## Appendix A

### Rationale for Including those 70 and above in COVID-19 Vaccine Distribution Phase 1b

**ACIP Phase 1b Recommendation:** Those age 75 and older. Due to Wisconsin epidemiological data provided by the DHS in decade form, **the Subcommittee supports the expansion of the group included in Phase 1b to age 70 and older.**

**Risk of COVID-19:** Age is the single greatest risk factor for mortality due to COVID-19. Using those diagnosed with COVID-19 age 18-29 as a comparison group, those age 75-84 are 8 times as likely to require hospitalization and at a *220 times higher likelihood to die*; those age 85 or older are 13 times as likely to require hospitalization and at a *630 times higher likelihood to die*.<sup>9</sup> To prevent this morbidity and mortality, ACIP recommended ranking those age 75 and older in Phase 1b along with some essential workers required for the preservation of societal functioning. Additionally, those age 65-74 are 5 times as likely to require hospitalization and at a 90 times higher likelihood to die than those age 18-29, so their immunization is also recognized as a pressing priority limited by vaccine availability and the significantly large number of individuals in the group (current Wisconsin population of 176,006, based on the US Census).<sup>10</sup> Thus, this age group was ranked by ACIP immediately after those age 75 and older, in priority Phase 1c.<sup>11</sup> As noted, based on DHS data, the Subcommittee supported expanding those in Phase 1b to include those age 70 and above. Canada<sup>12</sup> the UK<sup>13</sup> and the European Union<sup>14</sup> also use advanced age as the predominant criterion in ranking vaccine eligibility. However, it should be noted that mortality should not be the sole criterion of consideration of allocation. Though mortality rates may be lower in younger cohorts, morbidity (including severe consequences of long-term disease) may occur in affected individuals in younger populations.

**Alternative methods of COVID-19 avoidance:** Some members of this group may live in intergenerational housing that impedes the ability to self-isolate or otherwise mitigate the risk of infection. Age and its additional frailty and associated reduction in immunocompetence cannot be mitigated through social distancing and other non-pharmacologic interventions (NPI).

**Benefits of COVID-19 vaccination:** Due to the high risk of hospitalization and death in this population vaccination of this population will result in a twofold benefit, reducing overall hospitalization and reducing the mortality rate resulting from COVID-19 disease.

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<sup>9</sup> Centers for Disease Control and Prevention. *Older Adults; At greater risk of requiring hospitalization or dying if diagnosed with COVID-19*. Updated Dec. 13, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html> Accessed Jan. 5, 2021.

<sup>10</sup> Meiman J. *SDMAC Vaccine Subcommittee Review Materials*. Emailed to subcommittee members Dec. 26, 2020.

<sup>11</sup> Dooling K. *Phased Allocation of COVID-19 Vaccines*. CDC. Advisory Committee on Immunization Practices. ACIP Meeting. December 20, 2020. <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2020-12/slides-12-20/02-COVID-Dooling.pdf>. Accessed Jan. 5, 2021.

<sup>12</sup> Government of Canada. *Guidance on the prioritization of initial doses of COVID-19 vaccine(s). Priority Group 1*. <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/guidance-prioritization-initial-doses-covid-19-vaccines.html> Accessed Jan. 5, 2021.

<sup>13</sup> Joint Committee on Vaccination and Immunisation: *Advice on priority groups for COVID-19 vaccination*, 30 December 2020.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/94833/8/jcvi-dvice-on-priority-groups-for-covid-19-vaccination-30-dec-2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/94833/8/jcvi-dvice-on-priority-groups-for-covid-19-vaccination-30-dec-2020.pdf). Accessed January 5, 2021.

<sup>14</sup> European Union. European Centre for Disease Prevention and Control. *Overview of COVID-19 vaccination strategies and vaccine deployment plans in the EU/EEA and the UK*. <https://www.ecdc.europa.eu/en/publications-data/overview-current-eu-eea-uk-plans-covid-19-vaccines>. Accessed Jan. 5, 2021.

**Population size and vulnerability:** The current Wisconsin population of those age 70 and older is estimated, based on the US Census, to be 682,451, including those in long term care facilities.<sup>15 16</sup> Those in long term care facilities were included in the Phase 1a vaccination priority; therefore, the population cohort of unvaccinated persons age 70 and above will be now be significantly fewer (e.g., a 2006 study showed that 39.8% of those 85-89 and 72.1% of those 95 and over were in long-term care facilities).<sup>17</sup> The total population for this priority group is estimated at 682,451.

**Additional considerations:** The top ethical principles in consideration of this group were 1) Respect for Persons (26.9%), Promoting the Common Good (26.9%), and Reasonableness (23.1%).<sup>18</sup> Respect for persons requires that everyone be considered and treated as having equal dignity, worth and value. Promoting the common good entails equitably preventing illness and death by caring for the vulnerable elderly, with the added common good of striving to save lives. Reasonableness requires that resource allocation decisions are to be based on science, evidence, practice, experiences, and ethical principles.<sup>19</sup>

Another ethical point to be considered is that of equity. Health inequities are systematic differences in health outcomes, and opportunities to be healthy, that adversely affect socially discounted and/or marginalized groups.<sup>20</sup> Among the elderly are included those in socially disadvantaged groups that experience even higher rates of morbidity and mortality than their peers who are not socially disadvantaged.<sup>21</sup> An added benefit is that because of the reduction of morbidity and mortality of individuals through vaccination, there will be the prevention of the hospitalization and death of a significant number of disadvantaged individuals in the elderly population. Additionally, age is an independent factor that is unrelated to the ability to access medical care, so can be determined and applied more equitably and readily than identification of individual co-morbid conditions that depend upon the ability of individuals to access medical care and upon a record of the medical condition(s).

Finally, feasibility of identification of group members and implementation was deemed very high.<sup>22</sup> This feasibility of identification may be because most individuals of this age group will have established relationships with health care professionals and the health care system due to the overall incidences of diseases and other co-morbidities in this age group, as well as the Medicare/Medicaid eligibility of individuals in this cohort that provides the financial support for the provision of their health care.

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<sup>15</sup> Meiman J. SDMAC Vaccine Subcommittee Review Materials. Emailed to subcommittee members Dec. 26, 2020.

<sup>17</sup> Normandin, H., & Bogenschneider, K. (2006, February). *A policymaker's guide to long-term care in Wisconsin: Public, private, and family perspectives*. In H. Normandin & K. Bogenschneider (Eds.), *Long-term care reform: Wisconsin's experience compared to other states* (Wisconsin Family Impact Seminar Briefing Report No. 23, pp. 1-12). Madison: University of Wisconsin Center for Excellence in Family Studies. [https://www.purdue.edu/hhs/hdfs/fii/wp-content/uploads/2015/06/fia\\_brchapter\\_23c01.pdf](https://www.purdue.edu/hhs/hdfs/fii/wp-content/uploads/2015/06/fia_brchapter_23c01.pdf) Accessed Jan. 5, 2021

<sup>18</sup> State Disaster Medical Advisory Committee (SDMAC) Vaccine Subcommittee. *Survey results*. Meeting documents. <https://publicmeetings.wi.gov/view/f8e3fe4b-7182-4440-a5ea-d9c6f2e8ffc7/1/vaccine> Accessed Jan. 5, 2021.

<sup>19</sup> Department of Health Services. *Ethical Framework to Guide the Allocation of COVID-19 Therapeutics and Vaccines*. <https://www.dhs.wisconsin.gov/publications/p02864.pdf>. Accessed Jan. 5, 2021.

<sup>20</sup> Department of Health Services. *Ethical Framework to Guide the Allocation of COVID-19 Therapeutics and Vaccines*. <https://www.dhs.wisconsin.gov/publications/p02864.pdf>. Accessed Jan. 5, 2021.

<sup>21</sup> Lewis NM et al. Disparities in COVID-19 Incidence, Hospitalizations, and Testing, by Area-Level Deprivation — Utah, March 3–July 9, 2020. *MMWR Weekly*. <https://www.cdc.gov/mmwr/volumes/69/wr/mm6938a4.htm>. Accessed Jan. 5, 2021.

<sup>22</sup> State Disaster Medical Advisory Committee (SDMAC) Vaccine Subcommittee. *Survey results*. Meeting documents. <https://publicmeetings.wi.gov/view/f8e3fe4b-7182-4440-a5ea-d9c6f2e8ffc7/1/vaccine> Accessed Jan. 5, 2021.

## Appendix B

### Rationale for including Congregate Living Facility Staff and Residents in Phase 1b

**ACIP recommendation:** No specific ACIP recommendation exists for this group. However, ACIP does consider it permissible to include this group in Phase 1b. *“Increased rates of transmission have been observed in congregate living settings. Based on local, state, or territorial epidemiology and implementation considerations, jurisdictions may choose to vaccinate persons who reside at congregate living facilities (e.g., correctional or detention facilities, homeless shelters, group homes, or employer provided shared housing units) at the same time as the frontline staff, because of their shared increased risk of disease.”*<sup>23</sup> For feasibility considerations, we recommend that **staff and residents** are vaccinated at the same time to reduce redundant visits and time cost to vaccination providers.

**The Subcommittee recommends that DHS restrict the definition of congregate living to the following:**

1. **Employer based:** Housing provided by an employer for 3 or more unrelated individuals that share bedrooms.
  - a. **Feasibility:** Low. Identifying and locating employer based housing, particularly in agricultural settings will be difficult. DHS may partner with existing service providers to further explore feasibility.
2. **Housing serving those with age or disability:** Housing provided that meets the definition of adult family home, community based residential facility, or residential care complex. There is likely significant overlap between at least the staff of this population and those identified in Phase 1a. Therefore, it is likely the unserved population is lower allowing more rapid move between phases.
  - a. **Feasibility:** Moderately high as these residences are likely licensed through DHS and easily identified.
3. **Shelters:** Shelter provided to those who are homeless and/or in need of refuge (e.g. domestic violence shelters).
  - a. **Feasibility:** Low to moderate. Vaccinating this population, particularly with two doses of the same vaccine may be difficult due to their marginalized status. Frequent turnover and limited bed days add challenges for series completion.
4. **Transitional housing:** Defined by the US Department of Housing and Urban Development as “a project that is designed to provide housing and appropriate supportive services to homeless persons to facilitate movement to independent living when such facilities include shared bedrooms.”<sup>24</sup>
  - a. **Feasibility:** Low to moderate. Some re-entry programs may be able to assist with follow up doses of those who were incarcerated. Identification of these facilities may be challenging as they do not need to be licensed; depending on length of the program administering one or both doses may be challenging.
5. **Incarcerated individuals:** Individuals in jails, prisons, and mental health institutes.
  - a. **Feasibility:** High. These populations have health infrastructure to deliver the vaccine and are easily identified.

**Note: the Subcommittee does NOT recommend vaccination of individuals in post-secondary educational “dorm” situations at this time.** The estimated population of this subpopulation is

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<sup>23</sup> Centers for Disease Control and Prevention. *Evidence Table for COVID-19 Vaccines Allocation in Phases 1b and 1c of the Vaccination Program.* <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/covid-19/evidence-table-phase-1b-1c.html>. Accessed January 9, 2021.

<sup>24</sup> US Department of Housing and Urban Development. *Continuum of Care.* <https://files.hudexchange.info/resources/documents/CoC101.pdf>. Accessed January 9, 2021.



significantly large, that it would meet the definition of needlessly delaying vaccine for other at risk populations.

**Risk of COVID-19:** Risks associated with close, prolonged contact with non-relative family members increases the likelihood of COVID-19 spread. Each of the above settings has unique risks that make it difficult to mitigate. Specifically, shared bedroom spaces place these populations at high risk because they likely meet the definition of Centers for Disease Control and Prevention of exposure<sup>25</sup> (within 6 feet for more than 15 minutes at a time). The Wisconsin Department of Corrections reports more than 10,451 cases of COVID-19.<sup>26</sup> Group housing data reported by DHS indicates that group housing facilities have led to 454 reported outbreak investigations.

**Alternative methods of COVID-19 avoidance:** the settings identified above are identified because they are non-voluntary or provide services to marginalized populations. These populations do not have the resources or the choice to engage in non-pharmacologic interventions (NPI). In addition, the facilities identified above do not have adequate facilities for caring for individuals who are ill with COVID-19 disease.

**Benefits of vaccination.** Vaccination will diminish COVID-19 acute cases in the groups identified.

**Wisconsin population Size:** Those experiencing homelessness: 5,712 people were in emergency shelters, transitional housing, or safe havens in Wisconsin (including seasonal beds),<sup>27</sup> 7,510 correction workers, 20,244 incarcerated individuals (excluding county jails due to high turnover),<sup>28</sup> migrant workforce and H2 visa holders provide an estimated population of 5,702 for employer congregate living,<sup>29</sup> aging and disability population estimated at 77,338. Total population across all housing types for this priority population is estimated at **116,506**.

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<sup>25</sup> Centers for Disease Control and Prevention. *When to Quarantine*.

<https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/quarantine.html>. Accessed January 9, 2021.

<sup>26</sup> Wisconsin Department of Corrections COVID-19 Testing Dashboard.

[https://doc.wi.gov/Pages/COVID19\(Coronavirus\)/COVID19TestingDashboard.aspx](https://doc.wi.gov/Pages/COVID19(Coronavirus)/COVID19TestingDashboard.aspx). Accessed January 8, 2021.

<sup>27</sup> 2014 PIT Count. <https://www.hudexchange.info/resource/3031/pit-and-hic-data-since-2007/>.

[https://www.hudexchange.info/resource/reportmanagement/published/CoC\\_PopSub\\_State\\_WI\\_2014.pdf](https://www.hudexchange.info/resource/reportmanagement/published/CoC_PopSub_State_WI_2014.pdf). Accessed January 9, 2021. Note: these numbers are from 2014 and are likely higher due to the impact of the pandemic on housing during 2020.

<sup>28</sup> Meiman J. SDMAC *Vaccine Subcommittee Review Materials*. Emailed to subcommittee members December 26, 2020.

<sup>29</sup> Wisconsin Department of Workforce Development Bureau of Job Service. *2018 Migrant and H2A Worker Population Report*. [https://www.uwsp.edu/cnr-ap/clue/Documents/megatrends/Wisconsin\\_Land\\_Use\\_Megatrends\\_Agriculture\\_Labor\\_Force.pdf](https://www.uwsp.edu/cnr-ap/clue/Documents/megatrends/Wisconsin_Land_Use_Megatrends_Agriculture_Labor_Force.pdf). Accessed January 9, 2021.

## Appendix C

### Rationale for inclusion of non-EMS First Responders in COVID-19 Vaccination Phase 1b

**ACIP recommendation:** The CDC identifies specific occupations that are categorized as critical infrastructure; the First Responder category includes firefighters, EMS providers, law enforcement officers (LEOs) and medicolegal death investigators. Within these categories, those that are licensed healthcare providers with direct exposure to SARS-CoV-2 are already included as Phase 1a vaccine recipients; the scheme for Phase 1a has been finalized by the SDMAC and DHS. The remaining First Responder categories will identify non-medically licensed providers filling these roles.

**Risk of COVID-19:** Data reporting on COVID-19 infection and death is approximated based on publicly available information reported on labor or professional organization websites and are extrapolated based on populations reported in Wisconsin. While OSHA requires employer reporting for employees who are hospitalized and/or die from COVID-19, it does not require reporting of mild/moderate COVID-19 infection not causing hospitalization or deaths.<sup>30</sup>

For LEOs, national news and professional organizations have reported over 180 line of duty deaths (LODD) from COVID-19 infections, 4% of LEOs nationwide have tested positive and 1/3 of those were unable to return to work<sup>31</sup>. COVID-19 related deaths were the leading cause of LODD for LEOs in 2020.<sup>32</sup> One LEO COVID-19 related LODD was reported in Wisconsin in 2020<sup>33</sup>. Extrapolating the 4% approximation for LEO positivity, approximately 500 LEOs in Wisconsin may test positive.

There is no tracking mechanism for COVID-19 infection or death among non-medically licensed coroners nationally or in Wisconsin; the remaining 35 medical examiners in Wisconsin are licensed health care providers and any reporting on COVID-19 infection or death is aggregated among the 16,119 healthcare providers who tested positive and listed on the DHS website.<sup>34</sup>

Most firefighters in Wisconsin are also licensed as EMS providers, work as compensated employees and are members of International Association of Fire Fighters (IAFF). Data from the IAFF representing 300,000 paid fire fighters, report 10% of firefighters have been quarantined/isolated, 135 hospitalized and 20 deaths.<sup>35 36</sup> When extrapolating these percentages to the 700 non-medically licensed firefighters, 70 may test positive. There has been one reported non-EMS licensed fire fighter with a LODD from COVID-19.<sup>37</sup>

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<sup>30</sup> United States Department of Labor. *Frequently Asked Questions* <https://www.osha.gov/coronavirus/faqs#reporting>. Accessed January 7, 2021.

<sup>31</sup> WebMD. *COVID-19 Biggest Cause of Police Deaths this Year*. <https://www.webmd.com/lung/news/20201012/police-at-high-risk-for-covid-19-race-to-adapt>. Accessed January 6, 2021.

<sup>32</sup> Washington Post. *COVID-19 has Killed More Police Officers than All Other Causes Combined, Data Shows*. <https://www.washingtonpost.com/business/2020/09/02/coronavirus-deaths-police-officers-2020/>. Accessed January 6, 2021.

<sup>33</sup> Washington Post. *COVID-19 has Killed More Police Officers than All Other Causes Combined, Data Shows*. <https://www.washingtonpost.com/business/2020/09/02/coronavirus-deaths-police-officers-2020/>. Accessed January 6, 2021.

<sup>34</sup> Department of Health Services. *COVID-19 Hospitalizations*. <https://www.dhs.wisconsin.gov/covid-19/hosp-data.htm#hc%20worker>. Accessed January 7, 2021.

<sup>35</sup> WISN. *COVID-19 in Wisconsin*. <https://www.wisn.com/article/its-very-tragic-covid-19-challenges-firefighters-every-day/34897497#>. Accessed January 6, 2021.

<sup>36</sup> International Association of Fire Fighters/ <https://www.iaff.org/coronavirus/>. Accessed January 6, 2021.

<sup>37</sup> Leader Telegram. *Wisconsin Fire Chief dies of COVID-19*. [https://www.leadertelegram.com/covid-19/western-wisconsin-fire-chief-dies-of-covid-19/article\\_c3c321e7-7a5e-5a5b-9bc4-77a766094d80.html](https://www.leadertelegram.com/covid-19/western-wisconsin-fire-chief-dies-of-covid-19/article_c3c321e7-7a5e-5a5b-9bc4-77a766094d80.html). Accessed January 6, 2021.



**Benefits of vaccination:** LEO's have a duty obligation that requires direct contact with the public often during situations of protest, conflict, detainment and custody. Despite wearing a mask, the nature of the law enforcement may create situations that a LEO's mask may be inadvertently removed during confrontation. Non-licensed firefighters often represent community members that volunteer in rural fire departments. These organizations often struggle with recruitment and retention as well as resource restrictions and are often located in isolated and rural parts of the state. While they may now have access to PPE, vaccine could help bolster staffing which is especially critical in these communities.

**Alternative methods of COVID-19 avoidance:** Limited access to effective personal protective equipment. These individuals must interact with the public during the course of their jobs.

**Wisconsin population size:** There are approximately 12,400 law enforcement officers at the state and municipal levels<sup>38</sup>, 40 non-medical licensed Wisconsin coroners<sup>39</sup> and 7,443 non-EMS licensed volunteer Fire Fighters.<sup>40</sup> EMS workers who are counted in the total population have been vaccinated in Phase 1a. The total population for first responders as a priority population is **27,880**.

**Other considerations:** As outlined by ACIP and the CDC, the rationale for including these groups are aligned with the ethical framework including beneficence, justice, and equity.<sup>41</sup>

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<sup>38</sup> Statista. *Number of state and local police officers in the U.S. by state 2019*. <https://www.statista.com/statistics/750805/number-of-state-and-local-police-in-the-us-by-state/>. Accessed January 6, 2021,

<sup>39</sup> Department of Health Services. *Corners and Medical Examiners*. <https://www.dhs.wisconsin.gov/library/cmelist.html>. Accessed January 6, 2021

<sup>40</sup> April Hammond, Wisconsin Department of Safety and Professional Services, interview by M.R.Colella, January 7, 2021.

<sup>41</sup> Centers for Disease Control and Prevention. *Evidence Table for COVID-19 Vaccines Allocation in Phases 1b and 1c of the Vaccination Program*. <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/covid-19/evidence-table-phase-1b-1c.html>. Accessed January 9, 2021.

## Appendix D

### Rationale for Inclusion of Education into COVID-19 Vaccination Phase 1b

**ACIP recommendation:** In our review of ACIP documents, work group meeting minutes, ACIP meeting slides and in direct communication the lead staff of the work group, there is been no differentiation by ACIP between preschool/childcare, kindergarten through 12th grade (K-12) and post-secondary educational settings.

**Risk of COVID-19:** The impact of virtual schooling on the health and well-being of children and adolescents has been substantial. A significant barrier to in-person instruction, particularly in the most at-risk communities, relates to concerns about teacher and school staff safety, and their risk for SARS-CoV-2 infection. Many school districts and their teachers/staff are reluctant to return to in-person activities given the risks posed, since there is significant interpersonal contact in these settings. Teachers/staff come into contact with many individuals, often for sustained periods, which makes mitigation of risk simply by social distancing measures inadequate. In addition, approximately 1 in 4 teachers are at increased risk of poor outcomes from COVID-19 due to age, ethnicity, and co-morbidities.<sup>42</sup> The ability to immunize children themselves is some time off, as studies of vaccine dosing, safety and efficacy in this population are only just beginning.

Extremely high levels of SARS-CoV-2 occurred on college and university campuses in the fall of 2020, as campuses reopened during the pandemic.<sup>43</sup> Because of the high levels of transmission, there have been consideration of increased exposure and illness burden for faculty and staff at post-secondary educational institutions: “Although the risk of severe health outcomes from COVID-19 in young adults without underlying health conditions is relatively low, faculty, university staff, and close contacts of college students at home and in the community might be at a considerably higher risk for severe illness and death if they were to become infected.”<sup>[6]</sup>

Post-secondary faculty tend to be considerably older than their counterparts in K-12 educational settings: “The median age of the U.S. labor force is 42 years, versus 49 for tenure-track professors... Similarly, compared to the general working population, significantly more faculty members are age 55 or older (23 percent in general versus 37 percent in academe).”<sup>44</sup>

**Alternative methods of COVID-19 avoidance.** Childcare/preschool settings require, by definition, face-to-face contact between educators/staff and children. In other educational settings (K-12, post-secondary), the use of virtual modalities, blended approaches, and face-to-face teaching are available. There is a need, however, in many secondary and post-secondary settings (e.g., laboratory) for direct education. In addition, some school districts and institutions of higher education may invest in large-scale testing approaches for students and faculty/staff, but there is considerable inequity in availability and distribution across institutions.

**Benefits of vaccination:** Vaccination, when combined with other modalities (alternative teaching methods, testing, etc.), will allow some return to more normal educational approaches. This in turn can have significant social, economic and health benefits.

**Wisconsin population size:** The child care providers, teachers, faculty, staff, and administrators, including about 142,000 in daycare, and K-12 settings and 75,772 in higher education. However, in post-

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<sup>42</sup> Kaiser Family Foundation. *How Many Teachers are at Risk of Serious Illness If Infected with Coronavirus?* <https://www.kff.org/coronavirus-covid-19/issue-brief/how-many-teachers-are-at-risk-of-serious-illness-if-infected-with-coronavirus/>. Accessed January 9, 2021.

<sup>43</sup> Walke HT, Honein MA, Redfield RR. *Preventing and Responding to COVID-19 on College Campuses*. JAMA. 2020;324(17):1727–1728. doi:10.1001/jama.2020.20027

<sup>44</sup> Flaherty, C. *The Aging Faculty*. Inside Higher Ed. <https://www.insidehighered.com/quicktakes/2020/01/27/aging-faculty>. Accessed January 9, 2021.

secondary education, 37% of individuals are involved in direct teaching activities (~28,000).<sup>45</sup> One could consider, with limitations to faculty and staff with direct student contact, that the resulting eligible population for Wisconsin is 20,000. Total estimated population that meets the definition for frontline essential workers for this priority group is 160,000.

**Other considerations:** The prioritization of K-12 teachers/staff for COVID-19 vaccines could have a significant impact on children's health and well-being by allowing for in-person instruction. This in turn could help to mitigate the escalating pediatric mental health crisis,<sup>46</sup> improve detection of child abuse, and improve nutrition and obesity, in addition to positively impacting educational outcomes and addressing disparities. Parents concerned about allowing their children/adolescents to return to school may have some of their fears alleviated if teachers/staff are protected.

The ability of children to attend daycare, preschool and K-12 classes will allow parents to be more productive and bolster the economy appreciably. The current negative impact of closing schools has disproportionately affected indigenous populations and communities of color, further unbalancing the long-term inequities suffered by these groups. With teacher shortages and substitute teacher shortages an absolute reality, the vaccination of teachers/staff with continued infection control mitigation efforts would make in-person schooling possible and help return our communities to normalcy sooner.<sup>47</sup>

Vaccination should be offered to any individual faculty, staff or administrator in child care/preschool, K-12 and post-secondary educational settings, for whom **direct interaction** with students is required for achievement of appropriate educational outcomes.

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<sup>45</sup> National Center for Educational Statistics. <https://nces.ed.gov/ipeds/TrendGenerator/app/answer/5/30>. Accessed January 9, 2021.

<sup>46</sup> American Academy of Pediatrics. *Emotional and Behavioral Health Needs of Children, Adolescents, and Families During the COVID-19 Pandemic*. <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/interim-guidance-on-supporting-the-emotional-and-behavioral-health-needs-of-children-adolescents-and-families-during-the-covid-19-pandemic>. Accessed January 9, 2021.

<sup>47</sup> American Academy of Pediatrics. *Emotional and Behavioral Health Needs of Children, Adolescents, and Families During the COVID-19 Pandemic*. <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/interim-guidance-on-supporting-the-emotional-and-behavioral-health-needs-of-children-adolescents-and-families-during-the-covid-19-pandemic>. Accessed January 9, 2021.

## Appendix E

### Rationale for Non-Frontline Health Care Personnel to be included in COVID-19 Vaccination Phase 1b

**ACIP recommendation:** Frontline essential workers are permissible for Phase 1b.<sup>48</sup> Many HCP who are not involved with direct patient care are essential for health system infrastructure and operations. Without these HCP the health systems cannot function at capacity. Examples include information systems, transcriptionists, medical coders and other support roles critical to health system function. Recent cyberattacks on health care organizations during the COVID-pandemic brought several health systems to a halt highlighting the essential role of these ancillary HCP to maintain our health systems.<sup>49</sup>

**Risk of COVID-19:** Epidemiologic data examining the characteristics of HCP with COVID 19-associated hospitalizations shows that non-patient facing workers represent a significant proportion of overall HCP hospitalizations due to COVID-19 (32.6%), and some non-patient care roles such as HR/Administration and food service have a higher hospitalization weighted percentage than patient-facing roles.<sup>50</sup> Additional data suggest many essential workers in public service have higher rate of SARS-CoV-2 sero-prevalence than physicians and other clinicians.<sup>51</sup>

**Alternative methods of COVID-19 avoidance:** Some of these individuals may have been able to telecommute, but many may be in environments that place them at risk of COVID-19 without adequate PPE.

**Benefits of vaccination:** Resuming normal health care capacity and function resumption will reduce overall excess deaths attributed to the COVID-19 pandemic but not as a direct result of the SARS-CoV-2 virus.

**Wisconsin population size:** It is unclear what the total remaining population of health care personnel who were not vaccinated in Phase 1a. We would estimate no more than 25,000 individuals.

**Other considerations:** The Subcommittee only recommends vaccinating these populations if they are unable to continue with mitigation measures such as working from home.

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<sup>48</sup> Centers for Disease Control and Prevention. *Evidence Table for COVID-19 Vaccines Allocation in Phases 1b and 1c of the Vaccination Program*. <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/covid-19/evidence-table-phase-1b-1c.html>. Accessed January 9, 2021

<sup>49</sup> Joint Cybersecurity Advisory CSI/FBI/HHS. *Ransomware Activity Targeting the Healthcare and Public Health Sector*. [https://us-cert.cisa.gov/sites/default/files/publications/AA20-302A\\_Ransomware%20Activity Targeting the Healthcare and Public Health Sector.pdf](https://us-cert.cisa.gov/sites/default/files/publications/AA20-302A_Ransomware%20Activity%20Targeting%20the%20Healthcare%20and%20Public%20Health%20Sector.pdf). Accessed 1/9/2021.

<sup>50</sup> Kambhampati AK, O'Halloran AC, Whitaker M, et al. *COVID-19–Associated Hospitalizations Among Health Care Personnel — COVID-NET, 13 States, March 1–May 31, 2020*. *MMWR Morb Mortal Wkly Rep* 2020;69:1576–1583. DOI: <http://dx.doi.org/10.15585/mmwr.mm6943e3>

<sup>51</sup> ACIP Work Group on COVID-19 Vaccines. *Phased Allocation of COVID-19 Vaccines*. <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2020-12/slides-12-20/02-COVID-Dooling.pdf>. Accessed 1/9/2021.

## Appendix F

### Rationale for the Inclusion of Mink Husbandry Employees into COVID-19 Vaccination Phase 1b

**ACIP recommendation:** ACIP does not specifically identify mink husbandry, but does allow for agriculture. In the Subcommittee’s opinion, mink husbandry is inclusive within the ACIP definition, but should be prioritized before other similar occupations as there are specific risks associated with the mink population.

**Risk of COVID-19:** Risks associated with close contact of mink are unique and pose a biosecurity risk. SARS-CoV-2 are easily transmitted between human and mink populations and farmed mink can serve as a large reservoir of the virus. Each opportunity to pass between species allows an opportunity for the virus to mutate (e.g., mink variants). Viral mutations associated with mink populations in Denmark were strongly correlated with positive human infection, and included 7 different changes to the spike protein that could render the current vaccines potentially less or totally ineffective.<sup>52</sup>

**Alternative methods of COVID-19 avoidance:** Per the SSI report<sup>53</sup>, mitigation measures on infected mink farms were ineffective in preventing further transmission between mink and humans due to the large reservoir of the virus in the mink populations sustaining a significant biosecurity risk.

**Benefits of vaccination:** Vaccination of this population reduces the potential of mink variants by limiting the susceptible population of humans who can transmit the virus to or acquire infection from contact with mink. Currently, the SDMAC recommendation is limited to only those actively engaged with live animals and pelts (January 8, 2020). The Subcommittee recommends that DHS staff expand the population eligible for vaccination should the CDC or other responsible federal agency provide additional guidance.

**Wisconsin population size:** 21 farms in 13 counties with an estimated population of roughly 300 in direct contact with mink or mink pelts.

**Other considerations:** A small population over a geographically diverse area may be difficult to reach. However, the importance of maintaining viability of vaccine is outweighed by feasibility concerns.

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<sup>52</sup> European Centre for Disease Prevention and Control. *Detection of new SARS-CoV-2 variants related to mink – 12 November 2020*. ECDC: Stockholm; 2020.

<sup>53</sup> European Centre for Disease Prevention and Control. *Detection of new SARS-CoV-2 variants related to mink – 12 November 2020*. ECDC: Stockholm; 2020.