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).[1] 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,[2] the National Academies of Science and Medicine (NASM),[3] and the Wisconsin State Disaster Medical Advisory Committee Ethics Subcommittee Ethical Framework to Guide the Allocation of COVID-19 Therapeutics and Vaccines.[4]

DHS has made a subset of populations beyond Phase 1a eligible to receive vaccine, including adults age 65 and over, corrections officers, police, and fire personnel. The Subcommittee will not address these populations further in this document.

The Subcommittee recommends the following group for inclusion in the Phase 1b based on age, disability, and comorbidity.

> **IRIS and Family Care Recipients**: A majority of IRIS and Family Care recipients live in substitute care living facilities of some type. IRIS and Family Care recipients typically have multiple comorbidities, which may include intellectual or developmental disability. This group would include Children's Long Term Care Waiver and Katie Beckett Program when their age allows them to qualify for the vaccine. This group is easily identifiable, manageable, and reachable and comprised of individuals at increased risk for negative outcomes. This group is geographically

[1] Wisconsin Department of Health Services. https://www.dhs.wisconsin.gov/covid-19/deaths.htm#housing. Accessed 1/5/2020.
[2] 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
[3] 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
[4] 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

diverse, age diverse, ethnically and racially diverse, and poor (Appendix A – estimated Wisconsin population size **40,000-50,000**).

CONGREGATE LIVING: Facility staff and residents of congregate living settings should be considered for high prioritization due to their inability to mitigate the risk of COVID-19 through social distancing measures. Support for inclusion of congregate settings is provided in ACIP guidance (Appendix B – estimated Wisconsin population size – **237,902**).

PUBLIC-FACING ESSENTIAL WORKERS: The large population that met the ACIP definition of "front line essential worker" necessitated subprioritization within this group was needed to avoid inappropriately delaying vaccine access for other high-priority groups (e.g. those with high risk co-morbid conditions). Members of the Subcommittee expressed concern pertaining to the large population cohort included in Phase 1b—created by including all individual aged 65 years and older with the other priority groups—that does not include individuals based on their underlying health conditions (e.g., those with cancer, immunosuppression, and pulmonary disorders). The Subcommittee identified that approximately 45% of adults in Wisconsin are now eligible for vaccination at this time between Phase 1a and 1b. Many individuals with high risk medical conditions may be included within these priority, while others may be able to continue to mitigate their risk. The large population of individuals with chronic, high risk medical conditions, and uncertain supplies of vaccine, result in inability to further expand Phase 1b at this time.

The Subcommittee recommends inclusion of the following groups in Phase 1b based on the essential nature of their jobs, difficulty identifying trained replacements, or unique circumstances of employment:

9-11 Operators: The Subcommittee recommends expanding the current DHS priority to include 9-11 dispatchers as they have highly specific training and serve critical roles in emergency response. Finally, the feasibility of identifying and vaccinating these groups was identified as high by the Subcommittee (Appendix C - estimated Wisconsin population size less than **25,989**).

Utility Employees: The Subcommittee recommends including utility employees as they are required to be on site daily and have a 24 hour demand response. This population has an increasing high risk for infection and disease spread. These essential workers are limited in managing their time of exposure and social distancing. They cannot avoid contact with the public or other work environments (Appendix D estimated Wisconsin population size **11,195**).

Education and childcare: The Subcommittee endorses ACIP recommendation prioritizing 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 E - estimated Wisconsin population size **160,000**).

Public Transit: The Subcommittee endorses the ACIP recommendation for including public transit employees. These employees provides critical transportation to and from work and health services for many Wisconsinites. The Subcommittee recommends limiting this to only those public transit employees who serve in settings with public contact (Appendix F – estimated Wisconsin population size **27,560**).

Food Chain: The Subcommittee recommends inclusion of grocery, food production, hunger-relief and agricultural workers in Phase 1b. Their essential work maintains the integrity of the food supply during a health and economic crisis. Most work in high risk settings for SARS-CoV-2 transmission and have limited options to mitigate risk (Appendix G – estimated Wisconsin population **72,804**).

Non-frontline health care personnel: ACIP identifies public health, emergency management and other roles in Phase 1c. The group identified additional staff who perform essential roles

within healthcare organizations by maintaining cyber security, perform cleaning functions, scheduling, management of care organizations, and supply chain functions should be prioritized to enable a resumption of normal health care activities. These staff are often affiliated with hospitals, but non-hospital employee non frontline employees should also be included to create parody (Appendix H - 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 the risk that mink variants with spike-protein mutations will spread from animals to humans and potentially reduce vaccine effectiveness (Appendix I - estimated Wisconsin population size **300**).

The Subcommittee asks the public and employers to only select those who are at significant risk due to 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 continues the recommendation that no vaccine go to waste. Vaccination of additional individuals should be prioritized over wasting vaccine.

The Subcommittee recommends the below considerations if vaccine supply is constrained such that additional sub-prioritization is necessary (in no particular order):

Individual demographic characteristics and medical conditions have been identified that place individuals at higher risk of severe illness from COVID-19 infection.[5,6] 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+[7]
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

[5] 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
[6] 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
[7] 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.

Immunocompromised conditions
Solid organ transplant resulting in immunocompromised state
Obesity (Body Mass Index (BMI) of 30 kg/m2 or higher)
Sickle cell disease
Smoking
Intellectual or developmental disability[8]
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 chosen by vaccinating entities 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.

[8] 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 inclusion of All Family Care and IRIS Members in COVID-19 Vaccination Phase 1b

ACIP recommendation: No specific ACIP recommendation exists for this group. Wisconsin is unique in that a significant percentage of its population of older adults and people with disabilities with functional and financial needs receive their long-term services and supports in their homes and other community-settings. Many states rely much more heavily on nursing homes and other residential care facilities to meet the long-term care needs of their citizens. Like the residents of long-term care settings currently in phase 1a, Family Care and IRIS members also meet a nursing home level of care. Children's Long Term Care Waiver and Katie Beckett Program also have high levels of need. The majority of this program would be ineligible due to the age restrictions associated with the vaccines; however, the Subcommittee agreed allowing access to those 16+ was reasonable from an equity standpoint.

Risk of COVID-19: Incidence of COVID-19 infection is significantly higher for this population than for the general population. The COVID infection rate among all Family Care and IRIS recipients is 10.8%. As of January 5, 2021, 897 people in Family Care and IRIS had died.[9] The risk of COVID infection and negative outcome for the 42% of this population that has intellectual or developmental disability (I/DD) regardless of age is very elevated compared to the general population. For example, in one study, across all age groups, COVID-19 patients with developmental disorders (e.g., developmental disorders of speech and language, developmental disorders of scholastic skills, central auditory processing disorders) had the highest odds of dying from COVID-19. COVID-19 patients with intellectual disabilities and related conditions (e.g., Down syndrome and other chromosomal anomalies; mild, moderate, severe and profound intellectual disabilities; congenital malformations, such as certain disorders that cause microcephaly) had the third highest risk of COVID-19 death (OR=2.75, 95 percent CI, 1.657-4.558, P=0.0005). Among COVID-19 patients under age 70, intellectual disabilities and related conditions still had the third highest risk (OR=3.61, 95 percent CI, 1.878-6.930, P=0.0007)[10]

Benefits of vaccination: Eligibility for enrollment in Family Care and IRIS requires all participants to need long-term care services, be an older adult or an adult with a disability, and to meet financial eligibility requirements. Participants may choose to receive services in a variety of home and community-based living situations ranging from nursing homes all the way down to care in the person's home. While a majority of IRIS and Family Care recipients, live in substitute care living facilities of some type, some choose to receive services and supports from a variety of in-home providers. IRIS and Family Care recipients typically require assistance with at least 3 activities of daily living. This means that many recipients have multiple caregivers (paid and unpaid) coming to their residences and providing hands-on support. While the group of workers who provide this support are technically in phase 1a, because they are mostly "unaffiliated" workers, many of them have not yet received the vaccine. Additionally, it is unknown whether those who are vaccinated are still able to spread the virus. As a result, even the recipients who live in their own homes are at high risk of contracting the virus from those responsibility for meeting their care needs and may spread the virus to others who are caring for them. The group as a whole has multiple comorbidities, not the least of which is intellectual or developmental disability. Because of the diverse nature of their qualifying conditions (developmental disabilities, physical disabilities, and frailties associated with aging-as opposed to diagnosis) it is not feasible to tease out the number of recipients that demonstrates each comorbidity. What is salient about this group is that it is an easily identifiable, manageable, and reachable group of people who are at particular risk of bad outcomes

[9] Medicaid Adult Home and Community-based Services: Covid-19 Data https://www.dhs.wisconsin.gov/hcbs/data.htm#cases

[10] Johns Hopkins University School of Medicine. *Risk Factors for COVID-19 Mortality among Privately Insured Patients: A Data Analysis* (Tech.). (2020, November 11). www.s3.amazonaws.com/media2.fairhealth.org/whitepaper/asset/Risk Factors for COVID-19. Accessed. January 12, 2021

from the disease. In addition, it is geographically diverse, age diverse, ethnically and racially diverse, and poor.

Alternative methods of COVID-19 avoidance: This group, particularly the cohort that includes people with intellectual or developmental disabilities or other cognitive impairments such as dementia which can be present in individuals under 70, has difficulty complying with the normal masking, social distancing and hygiene protocols that reduce the likelihood of contracting COVID. This is not because of a willful refusal to comply, but because of their underlying disabilities. Sensory issues, communication disorders, and safety unawareness all contribute to this population's incapacity to take reasonable precautions against COVID.

Wisconsin population size: The number of Family Care and IRIS enrollees as of January 5, 2021 is 77,432. However, because many Family Care and IRIS recipients are 70 or older, or live in settings that are considered congregate settings, the additional number of people added to phase 1b by including this group is considerably smaller, more in the range of 40,000-50,000, allowing more rapid movement between phases.

Other considerations: The rationale for including these groups is aligned with the ethical framework developed by the SDMAC. The ethical principles that underlie including this group are: Equity, Fairness and Unity.

Feasibility: Feasibility is very high as these recipients' names and locations are all known to DHS. In addition, each recipient is connected to a Family Care Managed Care Organization or an IRIS consulting Agency, meaning there are professional care organizations who have ongoing contact with each recipient and can facilitate each person's vaccination.

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.*"[11] 18 States have added congregate living residents to Phase 1b.[12] For feasibility considerations, the Subcommittee recommends that **staff and residents** are vaccinated at the same time to reduce redundant visits and time cost to vaccination providers when appropriate.

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. Low probability of staff who meet the criteria.
    b. The Subcommittee was split (6 for 5 against) on whether this type of housing should be included in the definition due to low feasibility.
    c. **Public comment:** La Clinica supports the feasibility of this group. They believe they will be able to effectively serve many of these workers.
2. **Housing serving those with age or disability (e.g. Family Care or IRIS Recipients)**: Residents of housing that meets the definition of an adult family home, community based residential facility, residential care complex, state center for the disabled, mental health institute, and county based center for the disabled. A majority of IRIS and Family Care recipients live in substitute care living facilities of some type. IRIS and Family Care recipients typically have multiple comorbidities, which may include intellectual or developmental disability. This group is easily identifiable, manageable, and reachable and comprised of individuals at increased risk for negative outcomes. This group is geographically diverse, age diverse, ethnically and racially diverse, and poor. There is significant overlap between this population and people who are age 70+ and those covered in the Phase 1a long term care population. Therefore, the unserved portion of this group is lower, allowing more rapid movement between phases. The ethical principles that underlie including this group are: Equity, Fairness and Unity.
    a. Feasibility: Moderate to high as these recipients' names and locations are all known to DHS. In addition, recipients connected to a Family Care Managed Care Organization or an IRIS consulting Agency, will be served by professional care organizations that have ongoing contact with each recipient and can facilitate each person's vaccination.
    b. The majority of the Subcommittee supported this recommendation.

[11] 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.
[12] Kaiser Family Foundation. *The COVID-19 "Vaccination Line": An Update on State Prioritization Plans.* https://www.kff.org/coronavirus-covid-19/issue-brief/the-covid-19-vaccination-line-an-update-on-state-prioritization-plans/. Accessed January 11, 2021.

c. **Public Comments:** The Subcommittee received 90 comments (including one representing 45 organizations) supporting inclusion of this group in Phase 1b. There were no comments opposing it.

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 residents of shelter for 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. Staff may be able to be identified and vaccinated more easily than the residents.
    b. The Subcommittee was split on inclusion of this population in a scenario. One comment member reflected that a single dose vaccine would significantly increase the feasibility in this population.
    c. **Public comment**: The subcommittee received > 140 comments regarding homelessness, shelter workers, and frontline hunger-relief staff. There was overwhelming support for vaccination of homeless populations and staff without any stated objections. The sentiment was that immunizing this population was both ethically appropriate and feasible.
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."[13]
    a. Feasibility: Low to moderate for residents. 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.
    b. The Subcommittee recommended delaying vaccination of the residents of this type of housing until further phases while including the staff in Phase 1b.
    c. **Public comment**: no public comment for this group was explicitly identified.
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.
    b. **It is recommended that previously infected residents consider delaying vaccination for 90 days as the vaccine may not provide additional protection**.[14]
    c. The majority of the Subcommittee supported this recommendation.
    d. Public Comment: 100/100 comments were opposed to the recommendation to include incarcerated individuals in Plan 1b, some vehemently.
    e. The Subcommittee discussed this recommendation again after the public comment period. Discussion noted that incarcerated populations have an 8th Amendment right to health care. If the Subcommittee included other congregate living situations, there could be legal ramifications if this group was excluded from the definition. The majority of the Subcommittee continued to support the inclusion of this group.

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

[13] US Department of Housing and Urban Development. *Continuum of Care.* https://files.hudexchange.info/resources/documents/CoC101.pdf. Accessed January 9, 2021.

[14] Centers for Disease Control and Prevention. Frequently Asked Questions about COVID-19 Vaccination (Updated Dec. 29, 2020). https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html. Accessed January 12, 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. The Wisconsin Department of Corrections reports more than 10,451 cases of COVID-19.[15] 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 included 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),[16] 7,510 correction workers, 20,244 incarcerated individuals (excluding county jails due to high turnover),[17] migrant workforce and H2 visa holders provide an estimated population of 5,702 for employer congregate living,[18] assisted living housing has a total population of 151,809 the number of unserved residents remaining from Phase 1a is likely no more than 99,367 as we exclude those with advanced age and dementia.[19] Total population across all housing types for this priority population is estimated at **237,902**.

Ethical Considerations: Vaccinating both residents and staff addresses the ethical principles equity, fairness, and respect for persons. By treating all congregate living situations similarly, the Subcommittee upholds the ethical principles of equity, fairness, and respect for persons. These principles would be breached if the Subcommittee only prioritized certain types of congregate living that serve individuals and groups that may not have access to lower risk housing.

[15] Wisconsin Department of Corrections COVID-19 Testing Dashboard. https://doc.wi.gov/Pages/COVID19(Coronavirus)/COVID19TestingDashboard.aspx. Accessed January 8, 2021.

[16] 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. 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.

[17] Meiman J. SDMAC *Vaccine Subcommittee Review Materials*. Emailed to subcommittee members December 26, 2020.

[18] 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. Accessed January 9, 2021.

[19] Department of Health Services. Assisted Living Guide and Statistics. https://www.dhs.wisconsin.gov/guide/asliv-stats.htm. Accessed January 12, 2021.

Appendix C

Rationale for inclusion of 9-11 operators in Phase 1b

ACIP recommendation: The Subcommittee believes the ACIP recommendation for non-medical frontline responders to be included in Phase 1b covers this group. The majority of the Subcommittee recommends expanding the current understanding to include 9-11 operators as they play a critical role in emergency response and have specific training that is difficult to replace.

Risk of COVID-19: COVID-19 prevalence is unknown. Call centers are in small areas who cannot socially distance, could have to quarantine half of staff, not replaceable staff, highly trained. If one worker is exposed to the virus, significant operational challenges are experienced because large portions of the call center may need to quarantine.

Benefits of vaccination: Continuity of emergency operations will be maintained.

Alternative methods of COVID-19 avoidance: Operators may be at low risk in their job environment, but the Subcommittee continues to recommend them due to the critical nature of this work.

Wisconsin population size: Estimate for justice, public order, and safety activities of 25,989. 9-11 operators are a subset of this population, but DHS is unable to provide a more specific population estimate.

Ethical considerations: As outlined by ACIP and the CDC, the rationale for including these groups are aligned with the ethical framework including promoting the common good, justice, and equity.[20]

Public Comment: The Subcommittee added this recommendation due to the volume of public comment received and the highly skilled nature of this group.

[20] 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 the Inclusion of Utility Workers into Phase 1b

ACIP recommendation: ACIP recommends waste water treatment in Phase 1c. It does not specifically address public power. The Subcommittee recommends including public utility workers in Phase 1b because if power is interrupted during the vaccine campaign, the vaccine will be spoiled. Employees with 24 hours/7 day a week/365 day operations to secure gas, electricity and water for all organizations.

COVID-19 Risks: This population has an increasing high risk for infection and disease spread. These essential workers are limited in managing their time of exposure and social distancing. They cannot avoid contact with the public or other work environments.

Alternative methods of COVID-19 avoidance: Unknown, these workers have variable risk as some need to enter private homes, but others may be able to mitigate their risk through social distancing and other measures.

Benefits of vaccination: Continued critical infrastructure service.

Wisconsin Population Size: Population size is estimated at 11,195.

Ethical considerations: Vaccinating this population promotes the common good.

Public Comment: Utilities and Municipal workers across the State of Wisconsin were presented. Representation included Villages, Cities, Mayors, Regulatory Organizations and Professional Organizations submitted public comment to include these workers.

Appendix E

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.[21] 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.[22] 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."

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)."[23]

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-

[21] 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.

[22] 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

[23] 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).[24] Subcommittee recommends that institutions of higher education consider limiting vaccination to faculty and staff who under non-pandemic situations would have required direct student contact, which reduces this eligible population for Wisconsin to 20,000. Total estimated population that meets the definition for frontline essential workers for this priority group is 160,000.

Ethical considerations: The subcommittee evaluated ethical considerations for including educators in Phase 1b. The primary ethical principles included: "promoting the common good" (43.3%), "reasonableness" (23.3%) and "fairness" (16.7%).

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,[25] 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.[26]

Vaccination should be offered to any individual faculty, staff, or administrator in child care/preschool and K-12 education settings immediately under Phase 1b. The Subcommittee recommends limiting vaccination to faculty and staff in higher education settings with **direct student contact**.

Public comment: The subcommittee received 799 comments which stated support for prioritization of educators, and/or school staff, in some cases offering expanded definitions for school staff. There was overwhelming support (>99%) for vaccination of educators at all levels of child care. Most comments favored vaccinating all faculty and staff as opposed to only those involved with in-person teaching (14-fold for K-12, and 5-fold for post-secondary settings).

[24] National Center for Educational Statistics. https://nces.ed.gov/ipeds/TrendGenerator/app/answer/5/30. Accessed January 9, 2021.
[25] 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.
[26] 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 F

Rationale for inclusion of Transit Workers in COVID-19 Vaccination Phase 1b

ACIP recommendation: ACIP relied on the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA) guidance to define frontline essential workers as the subset of essential workers likely at highest risk for work-related exposure to SARS-CoV-2. Transit workers were included among these frontline essential workers because their work-related duties must be performed on-site and involve being in close proximity to members of the public.[27]

Risk of COVID-19: Although there is no national surveillance for COVID-19 among frontline or other essential workers, reports of high incidence and outbreaks within multiple critical infrastructure sectors illustrate the COVID-19 risk in these populations and the disproportionate impact of COVID-19 on workers who belong to racial and ethnic minority groups.[28]

Large COVID-19 outbreaks have been reported in multiple essential industries. Several factors contribute to workplace transmission in these industries, including high-density workplaces, prolonged close contact with coworkers, congregate/crowded housing, **reliance on public or shared transportation**, the need to hold multiple jobs, and frequent community contact among workers.

In addition to increased occupational exposure risks, transit workers were found to have high percentages of workers who experience a disproportionate burden of COVID-19 morbidity and mortality, including at least 15% of workers in the transit/postal/messenger/courier and trucking industries were >60 years and 26% of transit workers are Black (compared to 12% of all workers).

Transit workers were also found to have significantly higher rates of >1 underlying medical condition (asthma and diabetes) than other non-health care industries essential worker groups.[29]

Across the country, thousands of transit workers have tested positive for COVID-19 and hundreds have died.[30]

Benefits of vaccination: Vaccination of transit workers addresses their elevated occupational risk for SARS-CoV-2 exposure due to close interaction with the public. Additionally, keeping transit workers on the job is critical to ensuring other essential workers – health care (hospitals, clinics, nursing homes, and assisted living facilities) and non-health care (grocery stores, schools, childcare centers) get to their places of employment. Without the services provided by transit workers, many other essential services would not be able to operate. In addition to transporting other essential workers, transit workers are providing trips for the everyday needs of the public including medical appointments, dialysis, prescription refills, groceries, retail stores, and other community businesses.

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[27] 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 11, 2021.

[28] Dooling, K., Marin, M., Wallace, M., Mcclung, N., Chamberland, M., Lee, G. M., . . . Oliver, S. E. (2021). The Advisory Committee on Immunization Practices' Updated Interim Recommendation for Allocation of COVID-19 Vaccine — United States, December 2020. *MMWR. Morbidity and Mortality Weekly Report, 69*(5152), 1657-1660. doi:10.15585/mmwr.mm695152e2

[29] 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 11, 2021.

[30] Communications, N. W. (2020, October 20). Nearly a Quarter of New York City Transit Workers Report Having Had COVID-19. Retrieved January 11, 2021, from https://www.nyu.edu/about/news-publications/news/2020/october/transit-workers-covid-pilot-study.html

Alternative methods of COVID-19 avoidance: Though transportation providers have implemented cleaning and sanitation routines for vehicles, installed plexiglass barriers where space permits, and wear available personal protective equipment as they carry out their work, the nature of the transit workers' job requires them to interact with the public regularly during their work. Many asymptomatic residents are using transit services (not just designated healthcare transportation) to access COVID-19 testing sites, clinics, dialysis centers, hospitals, and other services.

Wisconsin population size: The population of Public Transit Workers is estimated to be 27,560.[31]

Feasibility: Feasibility of identification of group members was deemed to be fairly high. Employer based vaccination clinics would improve identification of group members and accommodate workers on varying shifts.

Ethical Considerations: As outlined by ACIP and the CDC, the rationale for including these groups are aligned with the ethical framework including maximize benefits and minimize harms, justice.

Other Considerations: The Subcommittee acknowledged that in rural areas taxi and ride share services may serve as public transit for vulnerable populations. A minority of the Subcommittee recommended including ride-share services. The majority did not recommend inclusion as this group may be large and unable to distinguish between ride share services in rural vs urban areas. A minority of the Subcommittee also recommended including flight crews in this population to create parody between these groups.

Public comment: The Subcommittee added this recommendation due to 40 public comments.

[31] Department of Health Services, *Wisconsin State Disaster Medical Advisory Committee Vaccine Distribution Subcommittee Table of Groups with Population.* https://publicmeetings.wi.gov/download-attachment/c694b8a6-9c53-4efa-88a0-f74669edcc2c. Accessed January 11, 2021.

Appendix G

Rationale for Inclusion of Grocery, Food Production, Hunger-Relief and Agricultural Workers in COVID-19 Vaccination Phase 1b

ACIP recommendation: ACIP relied on the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA) guidance to define frontline essential workers as the subset of essential workers likely at highest risk for work-related exposure to SARS-CoV-2. Grocery store workers along with food production and agricultural workers were included among these frontline essential workers because their work-related duties must be performed on-site and involve being in close proximity to other workers or members of the public.[32] Hunger relief workers (including volunteers), such as food pantry staff, are not specifically addressed by ACIP. They provide an essential service by ensuring food is available to individuals experiencing economic hardship during the Covid-19 crisis.

Risk of COVID-19: Although there is no national surveillance for COVID-19 among frontline or other essential workers, reports of high incidence and outbreaks within multiple critical infrastructure sectors illustrate the COVID-19 risk in these populations and the disproportionate impact of COVID-19 on workers who belong to racial and ethnic minority groups.[33] Frontline workers in grocery, food production, and agriculture are often in low-paying jobs without paid sick leave. They work in environments with high risk of SARS-CoV-2 exposure with limited options to mitigate risk.

In addition to increased occupational exposure risks, grocery/convenience/drugstores were found to have higher percentages of workers who are Black (14% compared to 12% of all workers) and Hispanics make up 19% of workers in grocery/convenience/drugstores (compared to 17% of the general workforce). Additionally, almost one quarter of essential workers live in low-income families.

Benefits of vaccination: Early access to a highly effective Covid-19 vaccine will help ensure a stable and secure food supply, reduce serious illness and death among these workers and their families, and may help protect coworkers and the public.

Wisconsin Population Size: The estimated population of grocery store workers and food/agriculture workers is 47,235 and 25,569, respectively.[34] The total population size for this group is approximately 73,000.

Alternative methods of COVID-19 avoidance: Most workers in this group have limited options to reduce risk, and they are required to work in settings where close exposure to the public or coworkers is common. Individuals in these industries who are able to work remotely are not included in the recommendation for phase 1b.

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[32] 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 11, 2021.

[33] Dooling, K., Marin, M., Wallace, M., Mcclung, N., Chamberland, M., Lee, G. M., . . . Oliver, S. E. (2021). The Advisory Committee on Immunization Practices' Updated Interim Recommendation for Allocation of COVID-19 Vaccine — United States, December 2020. *MMWR. Morbidity and Mortality Weekly Report, 69*(5152), 1657-1660. doi:10.15585/mmwr.mm695152e2

[34] Department of Health Services, *Wisconsin State Disaster Medical Advisory Committee Vaccine Distribution Subcommittee Table of Groups with Population.* *https://publicmeetings.wi.gov/download-attachment/c694b8a6-9c53-4efa-88a0-f74669edcc2c*. Accessed January 11, 2021.

Ethical considerations: As outlined by ACIP and the CDC, the rationale for including these groups are aligned with the ethical framework including maximize benefits and minimize harms, justice.

Feasibility: Feasibility of identification of group members was deemed to be fairly high, although it is unclear how vaccinating entities will identify eligible employees of smaller organizations. Large employer based vaccination clinics can facilitate identification of group members and accommodate workers on varying shifts.

Public comment: The Subcommittee received 1,785 public comments regarding the inclusion of this group. The public comments specifically addressed agribusiness, food manufacturing, grocery store workers, and hunger relief groups.

Appendix H

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 1c.[35] 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. ACIP identifies groups such as emergency management, public health (without public facing roles) as included in Phase 1c. After public comment and discussion between the members of the Subcommittee on January 20, 2021 only a minority of the committee recommended inclusion of this group. 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.[36]

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.[37] Additional data suggest many essential workers in public service have higher rate of SARS-CoV-2 sero-prevalence than physicians and other clinicians.[38]

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.

Public comment: Minimal public comment was included regarding this group. Concern was expressed that board members and other people who serve in minimal capacities would be served before members of the public.

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[35] 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

[36] 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%20_Activity_Targeting_the_Healthcare_and_Public_Health_Sector.pdf. Accessed 1/9/2021.

[37] 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

[38] 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 I

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.[39]

Alternative methods of COVID-19 avoidance: Per the SSI report, 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.

Ethical Considerations: promoting the common good by maintaining vaccine effectiveness.

Public Comment: 25/26 comments opposed to recommendation that mink farmers be included in Plan 1b. Most opposition was along the lines of mink farmers are not considered to be essential workers or could take steps to mitigate risk by the use of PPE. It does not appear that the majority of responders fully understood to biosecurity risks posed by animal to human transmission. With the understanding that there will continue to be opposition to inclusion of mink farmers in Plan 1b due to the lack of comprehension of the biosecurity risks involved as well as the small number of people that fall into this category it is recommended that no changes be made to the current language.

[39] European Centre for Disease Prevention and Control. *Detection of new SARS-CoV-2 variants related to mink – 12 November 2020.* ECDC: Stockholm; 2020.