



**Limitations of CDC/DOL's Guidance on COVID-19  
for Agriculture Workers and Employers**

By

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## **The Limitations of June 1 CDC/DOL COVID-19 Interim Guidelines For Agriculture Workers and Employers**

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July 5, 2020*

The Interim Guidance from the Centers for Disease Control (CDC) and the U.S. Department of Labor incorporates a fair amount of useful advice and insights but falls seriously short in making a practical contribution to stemming the spread of COVID-19 in agricultural workplaces, among agricultural workers, and in their households and the communities in which they live.

It is with the hope of improving the likelihood that key stakeholders in farmworker communities (agricultural employers, farmworkers themselves, crewleaders, farm labor contractors, grassroots advocacy organizations, employer associations and local government) can collaborate proactively to suppress and halt the spread of the COVID-19 virus – that we offer these criticisms and suggestions; because, as might be expected, they turn to CDC for expert advice on strategy and tactics.

Several of the factors likely to detract from the document’s efficacy/impact are described in more detail in this paper. But, in brief, in order to have a significant impact, the CDC/DOL guidance would have to give greater and more thoughtful attention to both:

- the communication challenges it faces in order to actually improve employer and worker behavior/practices
- the content of its guidance—relevance, thoroughness, framing, examples, and discussion of challenges, problem-solving, and limitations of its advice

### **Communications Challenges: Audience, Purpose, Organization**

The joint CDC/DOL guidance recognizes that the dynamics of the COVID-19 infection transmission implies that different actions will be required in distinct business, social, and community contexts. Each stakeholder, therefore, will have to be able to be persuaded and be engaged in adapting the CDC guidelines in a thoughtful way in order to make them work effectively in their environment. However, the technical tone of the guidance does not foster this outcome; it is not oriented toward fostering thoughtful action, nor user-friendly for its intended audience.

The audience for the CDC’s guidance, is urged to adapt materials as needed but not given guidance for how to do that. As a result, there has been reluctance by agricultural industry associations, as well as individual employers, to make changes to the CDC language. Although



there are some exceptions to this, fragments of the guidance are too often copied verbatim by employers or advocates or counties simply to signal compliance.

Consequently, the minimally modified material is passed down from the industry associations who are the primary providers of technical assistance in the industry to their employer members, and eventually to workers, without having much impact on their prior procedures and behavior; and without concerned but non-expert community members actually having a sound basis for understanding what might work best in their own organizational and community context.

Most problematically, the CDC/DOL guidance, while expecting that employers will be responsible for getting information to their employees, lacks any advice about how to meaningfully discuss COVID-19-related safety measures with their workers or how to gauge the success of their efforts to improve workplace safety vis-à-vis COVID-19 transmission. The main emphasis seems to be on ‘doing what you think feasible, if you can’ rather than catalyzing systematic problem-solving, identifying specific challenges and carefully considering possible solutions – taking into account the implications of this guidance.

The fields of Industrial design, organizational development and human resource management the CDC draws on in organizing its guidance and presenting content use specialized language, which many employers on the ground may not feel at home with or be able to apply well to their own settings – for example the CDC guidance section on key points includes terms such as “hierarchy of controls” that may be unused by most agricultural employers; and there are other opaque, tangential, or likely unfamiliar references as well. To be useful, what is communicated has to resonate with the reader – the person(s) who need to use the guidance - and clearly contribute to developing an effective plan of action.

CDC highlighting of concerns about employer-provided shared worker housing, transportation vehicles, and work settings that should, indeed, be taken into consideration, are, at points, so generic as to be useless (e.g. “employers have an obligation to manage the continuation of work in a way that best protects the health of their workers and the general public”). Here the references may resonate, but the references to what needs to be done are almost counter-productive – in the ‘do what you can, if you can’ framework.

The document needs to aspire to achieve more – to be action oriented.; as it stands it provides a “blank check” and invitation to half-hearted efforts to decrease COVID-19 transmission. At a very basic level, the objective has to be to make CDC guidance informative, actionable, motivational, with standards for gauging one’s success. The ultimate audiences for the guidance need to include the employers and the workers themselves (and maybe their families).<sup>1</sup>

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<sup>1</sup> If, in fact, the guidance document which, allegedly reflects CDC/DOL collaboration is apparently meant to reach employer audiences who are to be the primary channel for information to agricultural workers and their families. This is unfortunate since USDOL itself funds a national network of farmworker-serving organizations (the WIOA 167 grantees) whose role includes extensive adult education. The failure to recognize that the federal government continues to interact with migrant and seasonal farmworkers through a long-established set of programs and apparent inattention to the roles they, too, might play in building awareness of COVID-19 and promoting workplace safety is very surprising.



Thus, it is important to consider that dissemination of information and training has to be in the type of language that workers can understand. Most U.S. farmworkers' literacy is limited (e.g. about 1/3 of farmworkers have no schooling or only an elementary-level education) and, understandably, their conceptualization of the dynamics of transmission of respiratory disease will be limited by the pre-existing mental models they are familiar with.

For that matter, it is evident that even well-educated employers' and technical specialists' priorities in thinking about communicable disease has been conditioned by years of attention to transmission of other pathogens such as E. Coli, focusing more on surface contamination than airborne pathways of infection.

CDC/DOL guidance relies on print materials and is dense with references and links to other bureaucratic documents.<sup>2</sup> This is, perhaps, thought to be the fastest and most authoritative way to get information out. However, for farmworkers, and for many of their supervisors and field operations managers, print material is not the primary mode of information acquisition.

Lack of attention to alternative education modes – e.g. the utility of video training materials and workplace discussion sessions, etc. - limits the likely reach and effectiveness of the effort; it does not take into account the culture of learning in the target population and fails to discuss approaches that have already shown promise in building awareness and thoughtfulness around safety issues. Communication needs to be crafted to be easily-accessible and persuasive. Easily accessible materials that could be incorporated into guidance, are available, for example, that graphically describe spread of viral particles from coughing vs. sneezing and talking vs. shouting, the rationale for face covering, etc.

There is, for example, a graphic video from NEJM of a sneeze explaining how viral particles get disseminated (<https://www.nejm.org/doi/full/10.1056/NEJMicm1501197> ).

A similar resource on the problems of coughing is also available on the website (<https://www.nejm.org/doi/full/10.1056/NEJMicm072576>

Tomas Pueyo provides similar solidly well-sourced but popularly-accessible discussion of the rationale for face coverings as an important component in efforts to reduce transmission that is an excellent example of persuasive communication designed for the slightly-interested but dubious lay reader (<https://medium.com/@tomaspueyo/coronavirus-the-basic-dance-steps-everybody-can-follow-b3d216daa343> )

The unintended consequence of CDC's promulgation of abstractly-framed "guidance" about approaches for decreasing COVID-19 transmission is that employers can, by copying or

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<sup>2</sup> There are more than 15 references to other regulatory documents or websites. This is, on the one hand, understandable, but on the other hand, fails in providing adequately accessible actionable guidance. For example, the document is thoughtful in recognizing the potential of FQHC's (migrant/community health centers) as resources for the industry but reference to the HRSA website directory gives a potentially curious employer who might be oriented to acting effectively no ideas as to how partnering/collaborating with such "resources" might contribute to decreasing workplace transmission of COVID-19 or help in support for COVID-19-infectedworkers.



excerpting from the guidance document, assert that they are “in compliance with CDC guidelines” even if they are taking only minimal steps oriented primarily toward reducing their potential liability rather than striving diligently to actually make agricultural workplaces safer and meaningfully assessing whether those steps are working. And it is unlikely that workers themselves can or will use the guidance themselves.

### **Communication Challenges: Messaging To Encourage Worker Compliance with Recommendations To Self-Isolate or Self-Quarantine, as Appropriate**

CDC’s public messaging has consistently been oriented toward emphasizing the fact that about 80% of symptomatic COVID-19 cases are mild and that only 20% require hospitalization. This is extremely problematic, practically speaking, because it undercuts the impact of messaging about the importance of precautions to socially distance, use masks, to self-isolate if infected and self-quarantine if a close contact is infected. It also does not give weight to known serious health impacts, even for more mild cases. It essentially communicates: don’t worry, you won’t get it and if you do you won’t notice much. NOT NECESSARILY OR REALLY TRUE<sup>3</sup>, even for those who realize they have co-morbidities; and many people don’t until they are affected by COVID-19 and finally seek medical care.

There is ample research—in social psychology, in behavioral economics and elsewhere—that individuals’ and social groups’ decisions about engaging in one behavior or another (in this case desired behavior that reduces or increases COVID-19 transmission) always involve some measure of cost/benefit assessment by the individual or group.

If CDC fails to provide adequate information about the risk of COVID-19 transmission and about the probability of serious consequences for those who are infected, it cannot expect to secure an adequate level of compliance with social distancing, self-isolation, and self-quarantining to successfully reduce transmission.

Although the evidence remains anecdotal, we are now hearing of younger workers who have only mild symptoms or who are asymptomatic (e.g. close contacts of COVID-19+ workers who have been tested and found to be positive) who are reluctant to forego a week or more earnings by isolating themselves.

We do not yet know the definitive conceptual geography of the predominant farmworker population of Mexican immigrant farmworkers with respect to COVID-19, but it is quite clear that without concrete, specific guidance from CDC and public health authorities, quite reasonable mis-conceptions may arise—e.g. that asymptomatic and pre-symptomatic COVID-19+ individuals do not infect others, that young, healthy individuals in good physical shape will only have a mild course of illness. Nonetheless, adequate relevant knowledge, well-founded beliefs, and widespread acceptance of social norms that reduce transmission are required.

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<sup>3</sup> The research and clinical literature (now based on perhaps 6 months of direct experience with COVID-19 and experience with other coronavirus-caused illnesses) is clear in stating that it is very difficult to predict which mild cases of COVID-19 will rapid progress to become moderate or severe and that, although it is widely believed that genetic variation in immune system functioning is the reason, accurate prediction is not yet possible.



- Without awareness of the high prevalence of asymptomatic COVID-19 and in the absence of routine, repeated PCR testing, it is, unfortunately, reasonable for workers to be less diligent about social distancing and use of masks to reduce transmission.
- Without awareness as to what constitutes a “close contact” and the likelihood that a close contact will result in infection, the contacts of COVID-19+ individuals are even more reluctant to quarantine themselves and lose income they desperately need.
- The CDC can and should seek to reduce non-compliance with requests or advice to self-isolate or self-quarantine by providing accurate, scientific information about the factors associated with seriousness of COVID-19 and negative outcomes.

An important part of CDC’s responsibility is to provide relevant information on COVID-19 that can be the basis for better-informed decisions by agricultural employers and workers about how seriously they need to pay attention to the COVID-19 pandemic.

However, the guidance omits, or only mentions in passing, a number of important considerations which, if better appreciated, would contribute to reducing transmission—by bolstering employers’ and workers’ motivation to seek diagnostic (PCR) testing, facilitate case identification/investigation, and improve compliance with advice to self-quarantine or self-isolate.

- CDC’s guidance includes only passing reference to co-morbidities associated with worse outcomes (e.g. BMI >30, diabetes, high blood pressure). However, many farmworkers may not know if they are “high risk” due to co-morbidities. National Agricultural Worker Survey data shows that, nationally, 29% of farmworkers have not visited a primary care provider during the past 2 years.<sup>4</sup> These workers may well have co-morbidities associated with worse outcomes for COVID-19 infected patients and not know it. This is particularly problematic for male farmworkers (whose gender makes them more at risk both for infection and serious complications) because they are particularly likely to lack a “medical home” and, therefore, unprepared to assess their own risk or secure advice.
- CDC could make a simple, affordable recommendation to agricultural employers by urging them to provide all their workers who do not have a regular primary health care provider and up-to-date screening for diabetes or high blood pressure with no-cost basic medical checkups to screen for (at least) these conditions and to counsel them about the risks of bad outcomes if they do become infected.
- Alternatively, CDC could urge workers to self-screen; blood pressure cuffs are not very expensive, A1C home testing kits are available (though a bit more expensive). This would be useful by way of promoting general health as well as providing a basis for workers to reasonably assess the personal health risk that COVID-19 poses for them.

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<sup>4</sup> Susan Gabbard, Wenson Fung, and Daniel Carroll, “Recent Changes in U.S. Agriculture and Crop Worker Characteristics”, presentation to 2020 Western Forum for Migrant and Community Health”, February 20, 2020.



The CDC/DOL guidance also fails to appreciate the implications of the demographics of the farmworker population for contracting COVID-19. Specifically –

- ***The current age distribution of the U.S. farm labor force.*** CDC’s emphasis on stating that risk of serious COVID-19 illness is much greater among older individuals, while accurate, detracts from recognition that risk is, indeed, lower, but still substantial among working-age individuals, particularly the 20-64 year-old cohort who make up such a high proportion of the current farm labor force. (NAWS shows the average farmworker in 2015-2016 was 40 years old).<sup>5</sup> Risk of serious illness is, indeed, much higher among the elderly (65+) but it is significant for working age farmworkers.
- ***The fact that 69% of farmworkers are men*** and that COVID-19 is more problematic for men than for women.<sup>6</sup> A very high-quality study of a Latino population composed primarily of working-age adults showed gender was highly correlated, not only with worse outcomes, but with likelihood of infection. Sound guidance to agricultural employers and their workers should also incorporate this information to assure that male workers have a sound basis for assessing their risk.
- It should be noted that CDC/DOL guidance, as mentioned at the top of this section, also neglects to mention anything about the known sequelae of serious cases of COVID-19—e.g. ongoing cardiovascular problems in some cases which would probably affect a worker’s subsequent employability.

CDC messaging should state clearly that risk of serious COVID-19 illness is, indeed, age related, but, nonetheless, significant among middle-aged workers.<sup>7</sup> CDC’s MMWR for March 18, 2020 shows that the risk of hospitalization can be quantified and that it is significant for the working-age population. CDC’s analysis shows that 14%-21% of adults 20-44 years old needed to be

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<sup>5</sup> CDC, MMWR, March 18, 2020 “MMWR Hosp and ICU by Age Cohort”

<sup>6</sup> See Gebhard et al. (May, 2020) <https://doi.org/10.1186/s13293-020-00304-9> for calculation of the elevated fatalities among men. See Gabbard 2020 for gender of farmworker men based on 2015-2016 NAWS data (the most recent).

<sup>7</sup> There is not complete clarity or agreement as to definitions of “mild” vs. “moderate” vs. “serious” COVID-19 illness. However, in assessing the risk experienced by a COVID-19+ agricultural worker, any deterioration of a case that requires hospitalization is “serious”. Even if the likelihood of a good outcome in a moderate case is high, the economic impact on the individual and their family will be serious. It should be noted that the analysis referenced here assumes that hospitalization is an acceptable proxy for “serious illness”. However, given the barriers farmworkers face in securing appropriate medical care, it is likely that some “serious” cases, defined as those where medical attention would improve eventual outcome, are not hospitalized. Consequently, a fertile area for systemic improvement is to further explore (some exploration has already been done) to what extent relatively intensive outpatient services (e.g. oxygen saturation monitoring, supplemental oxygen) could suffice for moderate cases.



hospitalized; among adults 45-64 years old hospitalization rates were estimated as 21%-30%. In this span of working-age adults 20-64 ICU admission ranged from 2%-12%.

Perhaps, it might be useful to include a graphic representation of risk, e.g. from green signaling minimal risk of serious illness among persons under 16 years of age, yellow to orange for working-age adults, and red for the elderly.

Finally, among the communication challenges it faces in effectively communicating the risk associated with COVID-19, CDC needs to recognize as part of its guidance that for a population of low-income farmworkers, more than half of whom are undocumented, almost half of whom are uninsured, who seldom have household savings, even if the hospital stay is shorter than the average (e.g. only 3 days instead of 8 days) and the outcome positive, hospitalization is a major disastrous personal risk.

The predominantly Hispanic farmworker population is not simply at higher risk of contracting COVID-19 but also faces higher-than-average risk of serious complications, and in terms of personal and household well-being, the consequences of serious COVID-19 illness are very much higher than average. This recognition should be incorporated into the guidance and integrated into messaging that addresses why agricultural employers and employees should strive seriously to minimize COVID-19 transmission even when that entails significant economic costs or inconvenience.

A very basic component for judicious CDC guidance to employers would be to suggesting adopting provisions (even if not legally mandated to do so) to assure agricultural workers that their time in quarantine or self-isolation will be compensated so as to provide 100% replacement for their usual earnings.

Without decreasing the economic disincentives that push workers toward continuing to work even if infected or exposed, it will be difficult to adequately maintain safety in agricultural workplaces. Perhaps CDC believes that such advice is “not in its lane” but it is now very well understood that social, economic, and behavioral determinants of health play a huge role in outcomes and deserve to be a central concern of public health professionals as well as policymakers.

### **Content of the Guidance: Communication of Key Points of CDC Guidance**

The short “key points” section of the CDC guidance document is structurally important because it is intended to be, and often will be, the only section that many in their targeted populations will actually read. Thus, this section has to be short and to the point. However, the point has to include a standard for knowing when the user of the guidance is deploying it successfully to improve an agricultural workplace or to what extent agricultural employees’ individual and collective behavior is being positively and significantly impacted.

CDC has to provide guidance about standards for success. Currently the latter is largely missing. It might be useful to incorporate into this section arguments that adoption of “best practices” can actually make a huge difference in reducing the local reproductive rate of COVID-19 ( $R_{eff}$ ).



Including information on “best practices”, drawn from case studies of outbreaks of COVID-19 in agricultural workplaces, worker housing, and communities will also serve to frame the CDC guidance as being related to the real-world day-to-day context of agriculture.

- Need For Guidance About Methodology for Worksite Assessment

CDC’s guidance is wise to encourage worksite assessments to identify risks at a specific worksite and go on then toward developing strategies for infection prevention, as well as to appoint workplace safety coordinators. But there is minimal guidance for agricultural employers about how to do this.

Practical ethnographic applied research methods for systematic observation of workplace interactions have been used extensively in design of workforce skills development initiatives but CDC seems unaware of these although they hold out a good deal of promise as the basis for effective workplace reorganization and COVID-19 prevention. The discussion of worksite assessment is obviously a place to include examples of promising, affordable, practical practices (e.g. plastic partitions separating workers tightly spaced along a conveyer belt as in field packing of lettuce, or in packing houses) and ideas about how to identify innovative ways to address recurrent problems.

It is obvious that one component of “best practices” for worksite assessment that is action-oriented is to engage workers themselves in discussion and brainstorming about modifications to operations that might decrease risk of COVID-transmission. Not only are workers well-placed to be participant-observers of day-to-day interactions at work; involving them also can make a contribution to building their sense of “ownership” of improved, modified practices. In particular, workers can, themselves, make unique contributions to crafting persuasive messaging that will have a positive impact on compliance with improved practices. Ultimately, it is even possible that worker involvement can increase the efficacy of investigations of outbreaks.

As the COVID-19 pandemic continues through the summer of 2020 and onward, it will be important not only to catalyze effective efforts to prevent COVID-19 transmission but, also, to respond to and contain as rapidly as possible outbreaks that do occur.

- Need To Assure That Employers Provide **Effective** Training to Agricultural Employees

Employers providing “basic” information and training about infection prevention in languages workers can understand is obviously important—a necessary but not a sufficient condition for having a positive impact. However, agricultural employers do not do most of the training of their employees themselves. Instead, intermediaries, field supervisors, farm labor contractors, crewleaders, mayordomos, determine operational procedures and provide training.

This growing distance between agricultural employers and the farm labor force is inevitable as production unit size increases. In California, for example, more than 30% of farm labor is supplied by Farm Labor Contractors. Their association (California Farm Labor Contractors’ Association), as well as agricultural employer associations (e.g. United Fresh, the Strawberry Commission) have been neglected as intermediaries in assuring guidance from CDC can be



“translated” conceptually and implemented practically. These intermediaries are typically looked to by agricultural employers as their primary source of definitive technical assistance on a range of specialized topics—especially those related to government regulations and workplace safety.

There are also roles for farmworker advocacy groups who are also stakeholders in farmworkers’ well-being and the health of the industry. California Rural Legal Assistance Foundation, for example, has made numerous practical contributions to identifying key issues in workplace safety. Surely, these intermediaries should be considered to be important audience segments and attention should be given to roles they can play in reducing overall farm labor force transmission. The epidemiological reality of COVID-19 is that the separate domains of workplace, home, and community cannot be neatly divided up.

CDC could, itself, collaborate with each of these segments to stakeholders to develop and provide farmworker-friendly, crewleader-friendly materials to agricultural employers to pass on to their field supervisors or labor intermediaries with the best possible training.

Such training should be designed to engage the workers themselves in the prevention effort – identifying issues/contexts that foster ‘up close and personal’; identifying and practicing strategies for how to stay safe and yet get the work done and communicate what needs to be communicated, etc. Only if the workers and the supervisors take responsibility and practice ‘being in this together’; will measures that depend on personal discretion and decision-making work.

CDC has to move beyond conveying seriously-lagged basic information toward providing effective communication that drives individual, community, and organizational learning. Its guidance needs to incorporate effective adult-learning principles to make this possible.

CDC should seek guidance from the National Skills Coalition who are experts in adult learning and training for “middle skill” workers, i.e. supervisors to make its materials more impactful. It should also draw more on lessons learned over several decades of participatory management to understand how to better foster a safety-conscious culture in labor-intensive agriculture.

- Need for Concrete and Enhanced Consideration of What Is Required as Part of “Basic” Training about COVID-19 Transmission, Self-Care, and Risks/Consequences

CDC’s conceptualization of “basic” training about COVID-19 (as communicated in public materials, handouts, public-facing websites) is too reductionistic. If only the ‘juried’ findings are listed, and not what is known about effective reduction of transmission and effective clinical treatment, there is no basis for making decisions. Certainly, at the start of the pandemic the information was sketchy; but even now what is shared by CDC is so skeletal/rudimentary that, despite being viewed as “definitive”, it has serious gaps in communicating crucial facts relevant to minimizing COVID-19 transmission.

Particularly glaring problems related to reducing COVID-19 transmission in the workplace include omission of CDC’s own findings regarding:



- Prevalence of asymptomatic infection (and implications for reducing COVID-19 transmission!)
- Definition of “contact” (based on proximity+duration+frequency of interaction).
- Limitations of temperature screening as a means of detecting COVID-19+ workers.
- Shouting (analogous to singing) as a mode of airborne transmission. This is a very practical concern vis-à-vis spread in the agricultural workplace where, with equipment in the background and an emphasis on speed, there is a lot of shouting in most workplaces, but it is not much mentioned.
- Examples of assessments of workplace operations to identify “high traffic” areas that are network nodes with elevated transmission risk (e.g. personnel checking-in produce that’s been harvested), shade for breaks, food trucks, forklift drivers, etc.

The lack of recognizable examples of real-world guidance makes it inevitable that the recommended worker screening procedures will not successfully keep the workplace safe.

A recent clinical report of “happy hypoxia” among young, apparently healthy adults in the Navajo Nation (<https://www.nejm.org/doi/pdf/10.1056/NEJMc2023540?articleTools=true> ) is, for example, relevant to employer and worker thinking about COVID-19 symptomatology. Quite simply, it suggests the desirability of 100% PCR screening; and providing on-site access to medical consultation.

CDC fails to recognize that a very high proportion of farmworkers do not have a relationship with a health care provider and that, therefore, COVID-19+ individuals who are self-isolating do not have easy access to advice about self-care. Self-diagnosis and self-care are a crucial element in the real world of farmworker communities. “Ask your health provider!” is not actionable advice for many. Practically speaking “official” COVID-19 diagnosis cannot be the primary criterion for triggering self-isolation and self-monitoring of COVID-19 illness because diagnostic (PCR) testing continues to be at best, difficult for farmworkers to access in most agricultural areas of the U.S., and in some areas, impossible.<sup>8</sup>

Agricultural employers would be wise to advise their workers to engage in presumptive self-diagnosis and appropriate self-isolation or self-quarantine (if they have an apparent COVID-19+ housemate/family member) while, at the same time, pressuring government to make free, easily accessible PCR testing available in outlying agricultural areas.

- The Need to Stay Up-to-Date with Developing Information

There is rapid change in knowledge and understanding of COVID-19, its symptoms, treatment options, impacts, and prevention. It is important that those trying to prevent spread of the disease and trying not to get it themselves stay up to date; and check-in with CDC’s public-

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<sup>8</sup> Ian T. Shearn, “Some South Jersey Farmers Won’t Let Seasonal Workers Be Tested for COVID-19”, NJSplight, July 3, 2020.



facing information distribution. However, everybody has a lot on their plate – not just the CDC; so people (employers and workers alike) do not have time to do this every day – unless it is absolutely necessary. CDC’s exhortation to agricultural employers (and, hypothetically, to workers if they were to read the document) to regularly check for updated information on COVID-19, is good, but inadequate. Epidemiology and clinical reports are rapidly yielding new insights – but this is framed by CDC in a nonchalant pro forma way. How often do people need to check in to stay informed – does CDC update every day? And does the CDC provide a quick guide about what’s new? The frequency of suggested check-ins with various website and information updates should be stated clearly (e.g. weekly or daily or monthly); and the speed at which new, practically relevant insights are being developed, should be strongly emphasized.

Beyond changes in key guidance, however, information about newly-developing insights should be highlighted, along with a metric of to what extent the information is definitive. CDC was very slow, for example, in highlighting loss of taste and smell (anosmia) as an indicator of the disease. Being much less common than some of the other symptoms among competing diagnoses, it is therefore more important. This lack of mention, we suspect, led people to come into work saying they were OK, when they really were shedding virus.

CDC needs to be sure that its guidance is up-to-date, and its implications clear for the user. Continuing to promulgate guidance to COVID-19+ patients to just stay at home, quarantine, and wait to seek hospitalization until they experience severe difficulty in breathing before seeking medical care is not appropriate for farmworkers, or those who do not have homes, or employers who have workers who do not have health care. This stance, likely based on efforts to assure hospital bed availability in the event of surges, is highly questionable – but even more than this it allows the employer and the worker to ‘slide by’ – not consider seriously how they need to think about protecting their health.

As clinical experience and clinical trials continue to assess experimental treatment strategies, more evidence (which is perhaps not yet definitive but which is accumulating rapidly) suggests, for example, that early monitoring of oxygen saturation, provision of supplemental oxygen, earlier use of anti-virals, and, in some cases, early and careful use of immunomodulators and anti-coagulants, improve outcomes.

Conceptualizing “basic” information as only making available summary generic information and providing guidance that is infeasible to implement in the real-world (i.e. re self-isolation in crowded housing) contributes to now widely-acknowledged inequities in the burden of the pandemic borne by low-income ethnic minority workers and households such as farmworkers.

“Basic training” could, for example, include suggestions regarding affordable and relatively straightforward steps drawn from clinical experience that could be taken at home for self-monitoring. Pulse oximetry is, for example, a cheap and easy-to-use way to monitor oxygen saturation. Instructions to monitor respiration rate (for >30 breaths/minute) might also be useful. The guidance, also, says nothing about the likelihood of relapse after an apparently mild case as a result of delayed immune system dysfunction/cytokine storm.



- Need for More Adequate Discussion of Exposure Risk

Employers' decision-making vis-à-vis COVID-19 transmission in the workplace, in worker housing, and transportation cannot be well-grounded unless the CDC gives them access to the best assessment currently available about risk. CDC's current guidance fails to incorporate a growing body of evidence that is relevant to risk assessment—especially in the case of employer-provided congregate housing.

- H-2A Worker Exposure Risk

It is good that CDC has given attention to transportation and housing as integrally linked to the agricultural workplace. Special consideration of risk in congregate living is good—sleeping, common space, eating areas. However, it is scientifically irresponsible to promulgate guidance that suggests that COVID-19 infection can actually be successfully controlled in congregate housing. Recommended practices to mitigate COVID-19 transmission make sense in principle but experience increasingly shows they are inadequate.

In general, the evidence of extensive COVID-19 transmission in close quarters provides unwelcome news about the efficacy of mitigating transmission in confined living spaces such as worker barracks, prisons, detention centers, and even nursing homes where careful precautions are implemented. An epidemiological note in NEJM (“In The Footsteps of Ernest Shackleton”) and commentary reports that 59% of the ship's passengers and crew became infected although all had been screened prior to embarkation using temperature screening and observation, and that COVID-19 spread extremely rapidly despite diligent precautions. <https://www.jwatch.org/na51706/2020/06/03/important-lessons-cruise-ship-related-covid-19>

In a recent outbreak at Villa Las Brisas in Ventura County where several agricultural companies housed H-2A farmworkers, despite proactive measures to reduce the likelihood of COVID-19 transmission, 86% of the congregate housing facility (188 of 216 workers) became infected. In reviewing this outbreak, it is clear that one or several workers initially contracted COVID-19 via community contacts and that it then spread rapidly through the congregate housing facility—in part because a very high proportion of the workers were asymptomatic and the cluster was only discovered after testing was provided to all workers after a small number of initial cases had been identified.<sup>9</sup>

There are additional news reports of COVID-19 outbreaks such as one in Ontario, Canada that underscore the challenges in controlling COVID-19 transmission in congregate housing even when diligent precautions are taken.

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<sup>9</sup> This Villas Las Brisas situation is, in some respects, similar to that of the cruise ship outbreaks in that an initial case was the seed for rapid spread within the facility. The H-2A workers had arrived in Oxnard where the outbreak occurred in March and April but when the outbreak was identified in late June, the fact that 86% of workers tested positive via PCR-based testing suggests the cluster had only developed very recently (since PCR testing begins to yield negative results relatively soon after recovery of either symptomatic or asymptomatic cases).



At the very least, CDC, and DOL/OSHA, should include in its discussion of congregate housing for farmworkers (mostly H-2A workers) information on experience to date and guidance to agricultural employers to inform workers of the risk of COVID-19 infection stemming from residing in this type of employer-provided housing. OSHA and DOL's Office of Foreign Labor Certification should require information on risks of contracting COVID-19 in congregate housing to be shared with prospective guestworkers.

➤ Risk of COVID-19 Transmission in Crowded Housing In Farmworker Communities

It is also appropriate that CDC recognizes all crowded housing as a major risk factor for COVID-19. However, CDC apparently fails to appreciate the implications for 2-way transmission of COVID-19 from workers' homes to the workplace and vice versa.

I have estimated, based on National Agricultural Worker Survey data, that the risk of within-household transmission in farmworker households is about 2.5 times higher than in the average U.S. household ([www.WKFamilyfund.org](http://www.WKFamilyfund.org)). CDC seems unaware of the underlying data (available from NAWS) or the extant data on prevalence of crowded housing among farmworkers where 30%-93% of housing in farmworker communities is crowded (>1 person/room).<sup>10</sup>

CDC guidance to employers regarding screening should include a recommendation to query workers on arrival at work about whether anyone living in the housing unit where they live (either in family households and multi-family "complex" housing locales including unconventional housing such as converted garages or backyard trailers) has exhibited COVID-19-like symptoms or tested positive.

A June 18, 2020 report from the University of California San Francisco research on COVID-19 prevalence in a census tract of San Francisco's Mission District where Latino immigrant housing is typically extremely crowded, also provides new and compelling information about how extensive COVID-19 transmission within-households is. Households with >5 persons in them were almost 6 times as likely as households of only 1 or 2 persons in them. (<https://www.medrxiv.org/content/10.1101/2020.06.15.20132233v1.full.pdf>)

Although the UCSF study was in an urban setting the characteristics of the study population and the housing are very similar to housing in farmworker communities. Self-isolation at home is not an acceptable strategy in these circumstances. CDC guidance to agricultural employers to send COVID-19+ workers home to shelter in place without explicit advice about the necessity of adequate facilities to permit effective self-isolation (i.e. an individual

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<sup>10</sup> The definitive study of farmworker housing in the Salinas Valley (Mines, 2018) shows not only that crowded housing is prevalent but that crowding is extreme (16% of surveyed farmworkers not even sleeping in a bedroom. The CDC provides no evidence that it has considered the complexities of self-isolation and/or quarantine in crowded housing that includes non-family social units. Mines reports that more than one-third of survey respondents (37%) lived in households he refers to as "joint dwellings".



bedroom and bathroom for an infected individual not to be shared with others) is irresponsible.

Although CDC may be reluctant to advise employers about their responsibilities beyond the physical workplace and employers may, themselves, wish to adopt a narrow visualization of their responsibility, the practical reality is that in typical farmworker communities, there is extensive 2-way transmission of COVID-19 and the workplace, even when community-level social distancing is mandated. The dictum of “We’re all in this together!” is quite literally true with respect to the COVID-19 pandemic. Employers who are indifferent to community context do so at their own peril.

As of June 28, 2020, county-level COVID-19 tracking on COVID-19 dashboards has reported levels of COVID-19 confirmed cases/100K population of 1,500-10,000/100K population in agricultural communities with concentrations of farmworkers in Florida, California, Washington, and Oregon. There are surely more. Since 35-50% of cases are asymptomatic, looking at the ratio of COVID-19 cases that are antibody-confirmed and PCR-based testing, it is likely that the actual prevalence of COVID-19 in these communities is actually in the range of 3%-20% of total population and increasing as COVID-19 flares up in diverse rural areas across the U.S.<sup>11</sup> CDC could and should contribute to building agricultural employer awareness of COVID-19 by including this sort of information in their “background” section of the guidance.

- Need for Better Guidance On Screening and Monitoring Workers and Managing Sick Workers

The most practically problematic single element in the CDC guidance document may well be the section on screening and monitoring workers. Details on screening are sensible. However, because the guidance fails to acknowledge the limitations on the efficacy of the recommended steps for agricultural employers to take, it conveys a false sense of complacency.

It is, of course, inevitable that any screening will be imperfect but it is irresponsible to fail to include in CDC messaging the recognition that, due to the limitations on screening, additional precautions, most notably social distancing and use of face coverings, need to be emphasized, as well as stepped-up diagnostic (PCR) testing of workers.

- Inadequacy of Temperature Screening

Temperature screening is justified as a practical contribution to reducing workplace exposure. However, the CDC guidance to agricultural employers is flawed by failing to

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<sup>11</sup> The UCSF study showed 29% definitively asymptomatic individuals in their sample, slightly lower than the 43% estimated in Iceland. CDC’s own planning compilation of planning scenarios includes estimates from 35%-50% asymptomatic. Because the UCSF study included both PCR testing and antibody testing and, therefore, could detect previous recovered cases, many of which may not have been reported, it is possible that the actual cumulative incidence of COVID-19 in low-income Latino communities with concentration of frontline workers and families living in crowded housing may be still higher than estimated here.



acknowledge that 36%-60% of COVID-19 infected individuals present without fever as a symptom (reports in NEJM). Even if diligently implemented as recommended by the CDC, temperature screening will generate complacency and a false sense of security unless it is clearly explained that the procedure is a useful but not definitive tool to reduce workplace exposure.<sup>12</sup>

➤ Queries Re Workers' Potential Household Exposure to COVID-19

The CDC guidance appropriately addresses the utility of querying workers re COVID-19 symptoms as they arrive, observing them during work, getting them away from the worksite if they start to have symptoms, coordinating to secure diagnostic testing, and encouraging workers who have symptoms to self-isolate, or providing them support in seeking medical care.

However, what is missing is that it is also crucial to query workers as to whether there is someone in their household who has been experiencing COVID-19 symptoms (even if they have not yet been diagnosed as positive via PCR or other testing).

The likelihood of within-household transmission (both within a family unit and in complex households with multiple families living under the same roof) is extremely high. Therefore, without the workplace screening to identify household exposures, the workplace-household link, already a 2-way street, is likely to become a 6-lane freeway.

It is to the advantage of workers and their families, and to employers as well, to be clear that sending farmworkers home to self-isolate is generally NOT a responsible step (since so many live in crowded housing and the infected worker will then be likely to infect all their family members) and that, conversely, allowing workers who may have been exposed to COVID-19 arrive at the workplace without querying them specifically about presumed or definitive household exposure is also irresponsible.

It is useful, also, to recognize that in many farmworker households, several individuals all work in agriculture. A worker who is advised to self-isolate at home and who cannot successfully do this is not only likely to infect his/her family but, also, other workers in the household (since close contacts are virtually inevitable in typical living conditions). They may well go on to infect other workers at the same worksite or at other worksites if they are employed elsewhere.

➤ CDC Acquiescence with Ag Industry Risk-Taking: Return to Work of Known Contacts of COVID-19+ Workers

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<sup>12</sup> It will be crucial for employers to understand that the “false negatives” generated in temperature screening for COVID-19 infection includes several sub-groups: the marginally symptomatic who do not run a fever, the pre-symptomatic cases who will subsequently become ill, and the genuinely asymptomatic cases who will never be identified except through PCR screening.



CDC's diagram/flow chart (not part of the guidance to agricultural employers but promulgated separately) delineating options for allowing workers to return to work in essential industries such as agriculture is problematic due to inclusion of the Strategy 3 Option (allowing "Tier 1" contacts of an COVID-19 infected worker to return to work if asymptomatic—with baseline negative testing recommended but not required) is very high risk.

The reason this option is so high-risk is due to the scientific evidence (and CDC-promulgated working assumptions underlying COVID-19 modeling) showing that: a) asymptomatic cases appear to be as infective as symptomatic cases and b) that in pre-symptomatic cases, infectivity is at a maximum about 2 days before symptoms appear.

The guidance should be that workers who have been exposed to a presumed or diagnosed COVID-19 case either at work or in their household (even if they have not yet been told to quarantine themselves by the county public health department) should be required to self-quarantine. In the real world of the COVID-19 pandemic in rural U.S. agricultural communities in the summer of 2020, access to PCR testing remains practically unavailable to many agricultural workers and their household members, case investigation and contact-tracing is, at best, lagging seriously or, in other cases simply not happening.

## **Conclusion**

The CDC/DOL Interim Guidance for Agricultural Employers and Agricultural Workers is disappointing, remarkably ill-informed about the demographic and socioeconomic characteristics of the U.S. farm labor force, about the nature of the labor-intensive agricultural industry, and how these factors affect COVID-19 transmission and illness in the population.

Multiple factors are at play in making the risks farmworkers face in confronting COVID-19 much more serious than those of the average worker. Average age of the workforce hovers around 43 years old; and often multiple farmworkers live in a household with multiple other people, and little ability to self-quarantine or isolate. This makes these front-line workers and their family members prime candidates for

- Contracting serious disease.
- Spreading infections within their household unit; and community
- Destabilizing the agricultural industry and food supply chain.

Still more worrisome than the likelihood that many agricultural employers will see the CDC/DOL guidance as irrelevant is its inconsistent linkage to the emerging body of evidence regarding COVID-19 transmission and the consequences of COVID-19 infection in the significant minority of cases where individuals become seriously ill.

It is crucial therefore, that whatever information CDC does provide to employers, workers, their families, and community members, be revised so as to provide thorough, practical, actionable advice that can then serve as a fulcrum for collaborative community learning and problem-solving as COVID-19 spread continues. This is particularly urgent for guidance to the



agricultural employers and workers in labor-intensive agriculture where, as the summer peak season begins, COVID-19 is spreading throughout major areas of labor-intensive agriculture (Florida, California, Washington, Arizona, Georgia, North Carolina)

So far, the information in the June 1 Interim Guidance has been perceived as practically irrelevant and has not had the required impact to suppress or stop the spread of the disease. The severity of the COVID-19 pandemic requires more than a pro forma “business as usual” scattering of bread crumbs of mostly, but not entirely, accurate information, recitation of facts that are already widely-known, and reference to additional dense, difficult-to-understand bureaucratic regulatory documents.

CDC has the opportunity to craft revised guidance that might actually have a valuable positive impact on an essential industry and an essential workforce that are highly vulnerable to COVID-19. However, major revisions are necessary.

The document’s guidance suggesting that hygienic precautions in congregate housing or in crowded independent housing can successfully avoid within-household COVID-19 transmission is not based on the available evidence regarding COVID-19 transmission in general or accounts of outbreaks in agricultural communities.

CDC’s guidance urging agricultural employers to wait for local public health system guidance about how to mitigate COVID-19 transmission in a specific workplace is inadequate in the current context. Public health departments are so backlogged with rising numbers of cases they cannot even successfully carry out their core responsibilities of providing widespread, easy access to free COVID-19 diagnostic (PCR) testing, case investigation/ contact-tracing, and assuring self-isolation or quarantine of COVID-19+ individuals or their contacts.

The rate of newly-confirmed COVID-19 cases in major agricultural counties in California, for example, make it clear that county public health departments cannot even conduct contact-tracing at an adequate rate to successfully mitigate spread. Reports of new cases/week as of July 1, for example show: Fresno (1,617), Kern (847), Tulare (936), Monterey (355), Ventura (1,092). Advice they provide will, inevitably, be hurried and, in some cases, seriously delayed. Local public health authorities in most agricultural counties do not have either the staffing or technical capacity to rapidly investigate new outbreaks, much less to provide optimal advice to employers on the steps they need to take to take to control further spread once a cluster is identified or to prevent future resurgence.

CDC should re-configure its “guidance” keeping in mind the challenges it faces in persuading an audience that includes many who discount the seriousness of the COVID-19 pandemic. As of July, 2020, non-compliance with public health officials most basic advice about steps all businesses should take to reduce COVID-19 transmission is uneven and threatens to assure continued spread of the pandemic. Moreover, agricultural employers are not generally aware of the modeling by epidemiologists at Harvard, Imperial College, London and others predicting there will inevitably be successive waves of COVID-19. Understandably, the mistaken, but prevalent, belief that the COVID-19 pandemic is a brief emergency weakens resolve to invest



time, energy, and money into the ongoing efforts that will be required to maintain a safe workplace.

Finally, to be effective, CDC guidance will need to “earn” credibility and secure recognition that its recommendations can actually make a difference. In order to do this, it will be critical for the document to strive for enhanced “authenticity” and focus more on taking real-world, practical steps to reduce transmission, not simply in the workplace, but in their workforce, and also addressing multiple factors related to housing and community life in agricultural communities that are relevant to COVID-19 transmission, access to diagnostic testing, availability of medical advice, and access to care in moderate to severe cases.



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