

DEPARTMENT OF INDUSTRIAL RELATIONS

DIVISION OF OCCUPATIONAL SAFETY & HEALTH**LEGAL UNIT**

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June 13, 2022

Subject: Response to Finance Comments on COVID-19 Prevention SRIA

Dear Ms. Mitra,

DIR appreciates Finance's detailed review of the SRIA of the proposed regulation for COVID-19 Prevention. Finance's comments appropriately characterize the proposed regulation and the estimated costs and benefits calculated in the SRIA. This letter intends to provide additional information documenting the assumptions and methodology underlying the economic analysis. Specifically, it responds directly to four concerns raised in Finance's comments.

1. TWO PARTS:

- a. **The SRIA must clearly report quantitative estimates of all fiscal impacts, including enforcement costs, and report state and local government impacts separately. The SRIA explains qualitatively that the Department of Industrial Relations may realize a cost savings in enforcement from reduced enforcement activity due to reduced transmission of COVID-19, but does not provide the required quantitative estimate.**

Upon further analysis, the Division does not expect to realize a cost savings from reduced enforcement if COVID-19 transmission levels are reduced by these proposed regulations. Rather, to the extent that COVID-19 rates are decreased, either by this proposal or by other factors, the Division will simply return staff to pre-pandemic activities.

Additionally, the Division expects that certain enforcement activities will return to normal. From the start of the pandemic, the Division received very high levels of complaints. The Division has statutory deadlines to respond to complaints in certain circumstances. (Labor Code sec. 6309.) In 2021, the Division received more than 5200 complaints that were coded for COVID-19-related issues; the actual number is likely higher, since it is possible that some COVID-related complaints were not coded properly. To deal with this influx, the Division took a number of measures in order to use its limited resources most effectively. Among these measures was an increased use of letter investigations starting in 2020. In a letter investigation, the Division sends a written query to an employer requesting information. A satisfactory response will conclude the matter; an unsatisfactory response, or no response, will cause the Division to open an inspection. The Division conducted more than 4400 letter investigations in

2021, the great majority of which were closed after a satisfactory employer response. If COVID-19 transmission rates decrease, the Division expects to conduct a greater proportion of its enforcement activity as onsite inspections, in keeping with pre-pandemic practice. Inspections, of course, are much more time-consuming than letter investigations.

Thus, reduced COVID-19 transmission rates will allow the Division to return to pre-pandemic activities rather than reduce enforcement costs.

- b. Additionally, the SRIA should discuss any expected impacts on penalties raised if the specificity provided by the proposed regulation is expected to provide sufficient guidance to employers to reduce citable violations.**

The Division has determined that it cannot reliably quantify a prediction of the degree to which the proposal will affect penalties collected from employers for COVID-19 violations. It is possible that the improved specificity of the proposed regulations will make it easier for employers to comply, relative to addressing COVID-19 hazards through the existing section 3203 and other regulations. If so, the overall number of citable hazards in California would decrease. It is unknown whether that would affect the total amount of penalties collected, however. The penalty for any particular violation depends on a complex variety of fact-specific factors set forth in regulation, Cal. Code Regs., tit. 8, sec. 334-336, which must be applied on a case-by-case basis. A violation of the identical regulatory section or subsection will result in an entirely different penalty, depending on surrounding facts which cannot be estimated in advance.

- 2. The SRIA does not attribute the workplace exclusion of symptomatic employees (which comprise 65 percent of COVID-19 cases) to the proposed regulation. However, if any employers begin excluding symptomatic employees in response to the specificity provided by the proposed regulation, the impacts of that exclusion must also be quantified.**

Based on Cal/OSHA's experience conducting investigations during the pandemic, DIR assumed that the vast majority of employers are already excluding symptomatic COVID-19 cases from the workplace and would do so without regard to the proposed regulation. Furthermore, due to the existing requirements in Section 3203, employers are already required to have in place "procedures for correcting unsafe or unhealthy conditions...in a timely manner based on the severity of the hazard." (Cal. Code Regs, tit. 8, § 3203(a)(6).) Therefore, DIR assessed that it was not reasonable to attribute the entirety of the costs or benefits of this requirement to the proposed regulation. If employers were not excluding symptomatic COVID-19 cases for the full duration of the exclusion period, as already required under Section 3203, then there would be a greater number of COVID-19 cases in the baseline as sick employees would likely be exposing and infecting others. If this were the case, based on the assumptions reported in the SRIA, the benefits of elevating all employers to full compliance under the proposed regulation would outweigh the costs of doing so.

For example, if the SRIA were to assume that the additional specificity in the proposed regulation contributed to employers excluding all asymptomatic COVID-19 cases and all symptomatic COVID-19 cases that might otherwise return to work, both the costs and the benefits would be higher. DIR already conservatively assumed that a portion of days of the required exclusion period for all asymptomatic cases would be attributable to the proposed regulation. As a proxy for the number of symptomatic COVID-19 cases that might otherwise return to work, one could use the percentage of nonfebrile COVID-19 cases that do not result in hospitalization or death. While this may still overstate the number of employees that might return to work before the end of the exclusion period as other symptoms may be as or more debilitating, it is a useful proxy because fever has been an employer condition for workplace exclusion long before the pandemic. In other words, employers' policies usually prevent feverish employees from coming to a shared workplace, regardless of whether the employee has COVID-19, flu, another virus, or a severe infection. Furthermore, many employers were recording employees' temperatures from the outset of the pandemic, even before the enactment of the emergency versions of section 3205 et seq. The UK ZOE COVID Study, which uses an app that collects self-reported information related to SARS-CoV-2, estimates the percentage of COVID-19 cases that have any of 32 given symptoms¹. A study published in April 2022 found that approximately 40% of COVID-19 cases reported symptoms including fever when Delta was the predominant strain and slightly less under Omicron (80% to 94% of the rate relative to Delta).² The SRIA assumed 35.1% of COVID-19 cases were asymptomatic, 58.2% were mild, 6.1% required hospitalization, and 0.6% resulted in death.

To calculate a maximum upper bound, assuming that 60% of mild cases were nonfebrile, a portion of the exclusion period for approximately 70% of all COVID-19 cases may be attributable to the proposed regulation.³ In this extreme case, the estimated costs would increase by approximately 35% to 45% and the estimated benefits attributable to the proposed regulation would increase by approximately 80% relative to the estimates in the SRIA. This is not expected because the exclusion requirement does not represent a policy change relative to the baseline—it is an existing requirement in Section 3203. It is highly unlikely that the additional specificity in the proposed regulation would affect behavioral changes in how employers are handling 70% of all COVID-19 cases. In addition to hospitalizations, a wide range of COVID-19 symptoms beyond a fever, or simply a positive COVID-19 test result, may leave employees unable to return to work before the end of the exclusion period—thus, there would be little change relative to the baseline. To address Finance's concerns, DIR will provide these disclosures on the Standard Form 399 and supporting documents.

¹ General information about the ZOE COVID Study app is available at: <https://joinzoe.com/learn/omicron-symptoms>

² Cristina Menni, *et al.*, "Symptom prevalence, duration, and risk of hospital admission in individuals infected with SARS-CoV-2 during periods of omicron and delta variant dominance: a prospective observational study from the ZOE COVID Study," *the Lancet*, 2022; 399: 1618–24, April 7, 2022.

³ This is calculated as 35.1% asymptomatic cases + (1-40%) × 58.2% mild cases = 70.0% of all COVID-19 cases.

- 3. The SRIA uses disease data from 2021, when the Alpha and Delta strains were dominant, as the basis for assumptions including transmission rate and case severity. More recent data indicate that the Omicron variant is less lethal and vaccination rates are higher than in 2021, implying that benefits may be about half the estimated amount.**

DIR acknowledges there is considerable uncertainty regarding future projections of COVID-19 transmission rates. In the SRIA, DIR relies on COVID-19 case projections from the California Department of Public Health (CDPH) for 2023 that are based on the COVID-19 Scenario Modeling Hub. These projections were provided to DIR on April 8, 2022 and incorporate data through as late as March 2022—therefore, baseline projections of transmission and case severity include the period when the Omicron strain was dominant. Specifically, DIR’s assumptions about the distribution of severity of disease come directly from CDPH’s estimates of the number of hospitalizations and deaths as a percentage of total cases. The transmission rate and case severity of future waves is uncertain.

DIR’s review of the public health literature included peer-reviewed studies that were published when the Alpha and Delta strains were dominant; however, DIR relied on the most recent available information to inform key assumptions in the SRIA.

Following DOF’s comments, DIR’s subsequent review noted additional studies, some of which were released after DIR completed the SRIA, with different estimates. Since this information was not available at the time to inform DIR’s decision-making, and the estimates would not change the direction of the net benefits (i.e., from positive to negative), DIR plans to continue to rely on the primary estimates in the SRIA.

For transmission, DIR based its estimates regarding close contacts on a 2021 U.S. study that found approximately 7 percent of close contacts with a COVID-19 case would lead to new infections at the community level.⁴ Subsequent to making our calculations, DIR identified a U.K. study published in February 2022 capturing early cases of the Omicron strain that suggests this assumption remains a reasonable one.⁵

Weighted prevalence in round 16 (November 23 to December 14, 2021) was highest... in those having been in contact with a confirmed COVID-19 case at 8.00% (7.25%, 8.82%) compared to 0.81% (0.73%, 0.89%) for those without such contact.

While a study of Omicron cases in Denmark published in January 2022 found the effective reproduction number of Omicron was 3.19 times greater than that of Delta under the same

⁴ Nowotny, Kathryn M., Kapriske Seide, and Lauren Brinkley-Rubinstein, *Risk of COVID-19 infection among prison staff in the United States*, BMC Public Health 21, 1036, 2021.

⁵ P. Elliott, *et al.*, *Rapid increase in Omicron infections in England during December 2021: REACT-1 study*, Science, February 8, 2022.

epidemiological conditions, it is not straightforward to convert the increase to the number of new infections, because community immunity levels have also changed.⁶ If the transmission rate were higher, as suggested, it would increase the benefits of the proposed regulation and lower the costs of excluding close contacts since more employees would test positive for COVID-19 in the baseline, while at the same time potentially increasing the number and cost of outbreaks. Evidence suggests that the Omicron variant is less lethal, and this is already reflected in DIR's assumptions about the distribution of severity of cases with regard to hospitalizations and fatalities.

Among hospitalizations, DIR relied on data from January to August 2021 published by the Centers for Disease Control and Prevention to estimate the distribution of severe and critical (i.e., requiring an intensive care unit (ICU) admission) cases. DIR assumed approximately 20 percent of hospitalizations would require an ICU admission.⁷ Subsequent to performing the analysis included in the SRIA, DIR found more recent estimates from November 22 to December 24, 2021 during the emergence of Omicron in Ontario, Canada. This study was published in early April 2022 and suggests the risk of hospitalization or death was lower for Omicron cases compared with Delta cases.⁸ This study suggests that approximately half as many hospitalizations for Omicron cases would require an ICU admission. Based on this information, if the SRIA assumed that 10 percent, versus 20 percent, of hospitalizations would require an ICU admission, it would reduce the overall level of benefits estimated by approximately 11 percent.

In response to Finance's letter, DIR reviewed assumptions about the proportion of COVID-19 cases that remained asymptomatic. Based on a meta-analysis that included studies conducted from January 1, 2020 to April 2, 2021, DIR assumed 35.1 percent of COVID-19 cases were asymptomatic.⁹ Two other meta-analyses have estimated the asymptomatic rate to be 40.5 percent and 44.1 percent, respectively.^{10,11} The latter study was released after DIR's SRIA was published. None of the meta-analyses included studies after the emergence of the Omicron

⁶ Ito, K., Piantham, C., & Nishiura, H. (2022). Relative instantaneous reproduction number of Omicron SARS-CoV-2 variant with respect to the Delta variant in Denmark. *Journal of Medical Virology*, 94(5), 2265–2268, January 11, 2022.

⁷ Taylor, Christopher A., et al., Severity of Disease Among Adults Hospitalized with Laboratory-Confirmed COVID-19 Before and During the Period of SARS-CoV-2 B.1.617.2 (Delta) Predominance — COVID-NET, 14 States, January–August 2021 | *MMWR* (cdc.gov), https://www.cdc.gov/mmwr/volumes/70/wr/mm7043e1.htm#T1_down

⁸ Ulloa, A. C., Buchan, S. A., Daneman, N., & Brown, K. A. (2022). Estimates of SARS-CoV-2 Omicron Variant Severity in Ontario, Canada. *JAMA*, 327(13), 1286–1288, April 5, 2022.

⁹ Sah, Pratha, *et al.*, “Asymptomatic SARS-CoV-2 infection: A systematic review and meta-analysis,” *Proceedings of the National Academy of Sciences of the United States of America*, August 24, 2021.

¹⁰ Ma Q, Liu J, Liu Q, Kang L, Liu R, Jing W, *et al.*, “Global Percentage of Asymptomatic SARS-CoV-2 Infections Among the Tested Population and Individuals With Confirmed COVID-19 Diagnosis: A Systematic Review and Meta-analysis,” *JAMA network open*, 2021;4(12).

¹¹ Bing Wang, *et al.*, “Asymptomatic SARS-CoV-2 infection by age: A systematic review and meta-analysis”, *medRxiv*, May 5, 2022.

variant. A UK study—published in May 2022 after DIR’s SRIA was completed—suggests that the BA.2 variant is more likely to produce symptomatic infection.¹²

The proportion of swab positive individuals reporting any of 26 symptoms was highest in those infected with BA.2 (75.9%, compared with 70% in those with BA.1, 63.8% in those with Delta, 54.7% in those with Alpha, and 45% in those with wild-type). Background prevalence of symptoms was also highest during January-March 2022, when Omicron dominated: 21.9% of all respondents reported one or more symptoms, compared with 13.5% during the wild-type period.

This information about the proportion of COVID-19 cases that are asymptomatic was not available at the time the SRIA was being prepared and therefore could not be considered in the economic analysis. While the data suggest the BA.2 variant is less likely to produce an asymptomatic response relative to other strains, it is unknown whether future variants will be more or less severe or will be more likely or less likely to result in asymptomatic COVID-19 cases. To address Finance’s concerns, DIR will provide these disclosures on the Standard Form 399 and supporting documents.

4. The SRIA does not clearly disclose how inflation is incorporated into the analysis, although the costs of acquiring materials such as filters for ventilation systems may be different under higher assumed inflation rates, particularly since some costs are based on old data (such as the MERV-13 filter costs based on a 2017 report). The estimates must incorporate the most recent inflation projections at the time of the analysis.

For direct comparison in the SRIA, all costs and benefits are reported in 2021 dollars (p.20, p.63). The estimated unit costs for specific preventative measures generally reflect prices as of the time of the research and writing of the SRIA, such as the cost of acquiring N95 respirators (based on vendor prices as of October/November 2021, p.32) and the cost of purchasing commercial HEPA units (based on listed vendor prices as of November 2021, p.41), and are converted into 2021 dollars, if necessary. Finance appropriately notes that unit cost estimates for MERV-13 filters were based on a 2017 report. However, to clarify, DIR specifically relied on estimates of the incremental cost (or cost differential) of MERV-13 versus MERV-8 filters, as some employers with older HVAC systems would be required to replace their existing filters with MERV-13 or higher-rated filters. DIR estimated the cost differential to be approximately \$0.03/square foot when replacing MERV-8 filters with MERV-13 filters (instead of replacing them with new MERV-8 filters). As the same manufacturers produce both MERV-8 and MERV-13 filters, it is likely both products are subject to the same inflationary factors; thus, the price

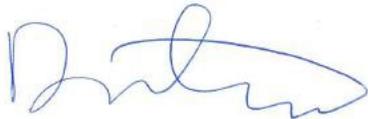
¹² Matthew Whitaker, et al., “Variant-specific symptoms of COVID-19 among 1,542,510 people in England,” medRxiv, May 23, 2022.

ratio of the two products would not necessarily diverge at the rate of inflation in the overall economy. DIR assumed the cost differential would remain constant over time.

The Department of Finance's Consumer Price Index Forecast estimates that California prices rose approximately 13.2 percent between 2017 and 2021.¹³ If the SRIA assumed that the price of MERV-13 filters rose at this rate relative to the price of MERV-8 filters, it would increase the estimated costs of "managing outbreaks" by approximately 0.5 percent and the estimated costs of "COVID-19 prevention in employer-provided housing" by approximately 2.6 percent. This would increase the overall cost estimates in the SRIA by \$0.2 to \$0.4 million, or less than 0.1 percent overall. Acknowledging Finance's concerns, DIR will address how inflation is incorporated into the analysis on the Standard Form 399 and supporting documents.

DIR appreciates the opportunity to further elaborate on the assumptions and methods used in the SRIA.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Danielle Lucido', with a stylized flourish extending to the right.

Danielle Lucido
Cal/OSHA Chief Counsel

¹³ California Department of Finance, Economic Forecasts, U.S. and California, prepared by the Economic Research Unit in April 2022, accessed at <https://dof.ca.gov/forecasting/economics/economic-forecasts-u-s-and-california/> on June 3, 2022.