

## **Contra Costa Health Services Department position statement on thermometer temperature screening as an infection control measure for COVID-19**

The medical literature contains very little data regarding whether thermometer temperature screening [“temperature screening”] of asymptomatic persons can reduce the risk for spread of COVID-19. Airport screening procedures during prior epidemics involving millions of screened persons including the SARS 2003, H1N1 2009, and Ebola epidemics have found no evidence that temperature screening reduced the risk of spread of infectious disease. For example, despite mass airport screening protocols, no cases of Ebola were found and 4 cases were missed and entered into the US. There are no studies that address temperature screening for entry into facilities, but it is reasonable to expect similar experiences. The World Health Organization (WHO) has noted that temperature screening alone, at exit or entry, is not an effective way to stop international spread. The medical literature on this topic is rapidly expanding and the prevalence of disease is fluctuating, so the discussion below may be subject to change if conditions change.

Despite the lack of known efficacy, temperature screening has become commonplace in the community as a surrogate test for infection with COVID-19. Some employees are being asked to check and record their own temperatures, and some are tested by the employer with devices such as temporal artery thermometers. Employers running such screening programs need to know their drawbacks. One such drawback includes the reality that a substantial percentage of COVID-19 infected [and infectious] persons do not have a fever and febrile persons can mask their fever with antipyretics. A screened afebrile person may therefore give others a false sense of security. Another weakness is the often poor correlation between a screened person’s skin temperature and core temperature, which can be problematic for employers. For example, hot or cold weather can cause marked variation in the skin temperature but not the core temperature. Also problematic is the lack of sensitivity of currently available screening thermometers to detect core temperature elevation, which has led medical authorities to question their efficacy. Another issue is that characteristic facial flushing and elevated skin temperatures are often not found in the early phases of other known viral infections, which may reduce the ability to detect early viral infection by skin thermometer reading. In addition, the act of screening persons may increase the infection risk of the screener. The screener may have to reduce recommended physical distancing protocols to get close enough to measure the screened person’s temperature. Some thermal camera systems have been developed which may avoid this last concern but these may not be practical or validated for facility use.

Employers should note that the Center for Disease Control [CDC] has published explicit guidelines for temperature screening for many workplaces. Some workplaces may also have specific society recommendations for temperature screening (i.e. skilled nursing facilities). If performed, temperature screening should be part of a larger education and pre-work screening effort which should include screening for common symptoms of COVID-19 and reminders of the importance of physical distancing, proper hand hygiene, and face coverings. Those who are directed to stay away from work should have explicit instructions, and employee information needs to be recorded and kept confidential. Procedures for dealing with screened persons who refuse to have their



temperature taken should be detailed. Facilities that have existing temperature screening programs in settings that the CDC has classified as "optional" may consider discontinuing temperature screening and replacement with symptom screening. Some employers may want to continue to perform temperature screening in these settings due to local health concerns. Paid sick leave may reduce the chances that a worker will attempt to come to work with COVID-19 infection.

In summary, temperature screening as a means of COVID-19 detection is very common in the community but there has been scant evidence in the medical literature of its efficacy. This situation is highly fluid, so employers are encouraged to first seek the most recent CDC guidance or specific society guidance on starting and running such programs. If the CDC has determined that temperature screening should be optional, Contra Costa Health Services generally does not recommend temperature screening. However, some facilities may wish to perform temperature screenings due to overriding local health concerns.

Rev 6.19.20

#### Citations

1. Xinghuo Pang et al. Evaluation of Control Measures Implemented in the Severe Acute Respiratory Syndrome Outbreak in Beijing, 2003 JAMA. 2003;290:3215-3221
2. Mouchtouri VA, Christoforidou EP, An der Heiden M, et al. Exit and Entry Screening Practices for Infectious Diseases among Travelers at Points of Entry: Looking for Evidence on Public Health Impact. Int J Environ Res Public Health. 2019;16(23):4638. Published 2019 Nov 21. doi:10.3390/ijerph16234638
3. Selvey LA, Antão C, Hall R. Evaluation of Border Entry Screening for Infectious Diseases in Humans. Emerging Infectious Diseases. 2015;21(2):197-
4. ACOEM Forum. COVID-19 Resource Center. COVID-19 Q&A forum. <https://acoem.org/COVID-19-Resource-Center/COVID-19-Q-A-Forum/A-colleague-in-manufacturing-has-done-100,000-temp-screenings-and-found-1-positive-Is-there-value-i>
5. CDC: COVID-19: Screening Employee Temperatures: What Employers Need to Know. April 3, 2020 <https://www.wilmerhale.com/en/insights/client-alerts/20200403-screening-employee-temperatures-what-employers-need-to-know>
6. CDC. General Business Frequently Asked Questions. "Should we be screening employees for COVID-19 symptoms (such as temperature checks)? What is the best way to do that?". <https://www.cdc.gov/coronavirus/2019-ncov/community/general-business-faq.html>

