

TO: Vermont Health Care Providers and Health Care Facilities
FROM: Jennifer S. Read, MD, FIDSA; Medical Epidemiologist

Use of Pulse Oximeters to Monitor Novel Coronavirus 2019 (COVID-19) Among Individuals with Laboratory-Confirmed SARS-CoV-2 Infection

Among several [deaths](#) in COVID-19 cases (all with laboratory-confirmed SARS-CoV-2 infection, the etiologic agent of COVID-19) in Vermont, hypoxemia appeared to occur prior to the onset of dyspnea. In addition, the [concept of 'silent hypoxemia' has been described](#) among COVID-19 cases outside of Vermont.

The Vermont Department of Health is embarking on a public health program intended to allow more rapid detection of clinical deterioration of COVID-19 cases through the use of pulse oximeters at home. Earlier detection of hypoxemia in COVID-19 cases could prompt earlier medical evaluation and, as indicated, supportive care such as provision of supplemental oxygen. In turn, it is hoped that more rapid initiation of supportive care for COVID-19 cases will also result in better clinical outcomes, including decreased mortality.

Within approximately 24 hours of a positive SARS-CoV-2 test result, newly diagnosed COVID-19 cases are contacted by Vermont Department of Health staff. At that time, COVID-19 cases are interviewed regarding symptomatology. All cases are counseled to seek medical evaluation if they develop dyspnea.

Through this new program, cases will be queried in the same interview about whether or not they have a pulse oximeter at home.

- If they do, they will be asked to use their pulse oximeter to monitor their oxygen saturation values throughout the day.
- Those who do not already have a pulse oximeter at home will receive one within 24-48 hours, and will be asked to monitor their oxygen saturation values.

All cases will be counseled to seek medical evaluation if their oxygen saturation drops below 90%. Oxygen saturations of 95-100% are generally considered normal, while the interpretation of saturations of 90-94% is often debated. However, oxygen saturations of less than 90% are generally considered abnormal and warranting further medical evaluation of the patient.

Subsequently, all COVID-19 cases will be contacted regularly over the next several days to ascertain the presence of various symptoms along with oxygen saturation results.

REQUESTED ACTIONS:

1. Be aware of this new pulse oximetry program for laboratory-confirmed COVID-19 cases.

2. Anticipate contact by COVID-19 patients in your practice or health care system if they develop dyspnea and/or hypoxemia while self-monitoring at home.

If you have any questions, please contact the HAN Coordinator at 802-859-5900 or vthan@vermont.gov.

HAN Message Type Definitions

Health Alert: Conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: Provides important information for a specific incident or situation may not require immediate action.

Health Update: Provides updated information regarding an incident or situation; unlikely to require immediate action.

Info Service Message: Provides general correspondence from VDH, which is not necessarily considered to be of an emergent nature.