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| **SSMED-1609** | **Acute Respiratory Disease (ARD) Management** |
| **Version No.** | 1 |
| **Content Owner** | Vikand Technology Solutions, LLC. |
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**The purpose of this document is to consolidate the general clinical management of patients with an acute respiratory disease (ARD), including SARS-CoV-2 (COVID-19) and influenza, as well as the prevention and control of transmission. Recommendations reflect current evidence-based practice as published by international health authorities and are subject to change as the pandemic evolves.**

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|  | **Acute Respiratory Disease (ARD) Case Definitions**   * 1. Patients presenting with an ARD should be investigated for, and diagnosed with, either an acute respiratory illness (ARI), influenza-like illness (ILI), or SARS-CoV-2 (COVID-19) using the case definitions below and clinical criteria as guidance.   2. Acute Respiratory Illness (ARI) * No reported feverishness or measured fever (< 38°C [100.4°F]); **AND** * At least one symptom of cough, sore throat, or rhinorrhea   1. Influenza-like Illness (ILI) * Acute respiratory symptoms and a positive influenza test; **OR** * Reported feverishness or measured fever (≥ 38°C [100.4°F]); **AND** * At least one symptom of cough or sore throat and in the absence of an alternative, more likely diagnosis. * Influenza and SARS-CoV-2 can have varying degrees of signs and symptoms, ranging from no symptoms (asymptomatic) to severe symptoms. Refer to U.S. CDC for key differences *–* [*https://www.cdc.gov/flu/symptoms/flu-vs-covid19.htm*](https://www.cdc.gov/flu/symptoms/flu-vs-covid19.htm)   1. SARS-CoV-2 Clinical Criteria * Two or more symptoms: fever (measured or reported), chills, rigors, myalgia, headache, sore throat, nausea or vomiting, diarrhea, fatigue, nasal congestion; **OR** * Any one symptom of cough, shortness of breath, difficulty breathing, new olfactory disorder, new taste disorder * Covid-like illnesses (CLI) include the SARS-CoV-2 clinical criteria without a confirmed RT-PCR test and in the absence of an alternative, more likely diagnosis. * Severe respiratory illness with at least one of the following:   + Clinical or radiographic evidence of pneumonia,   + Acute respiratory distress syndrome (ARDS) * Refer to US CDC – [https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-COVID-19/case-definition/2020/](https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-definition/2020/)   1. SARS-CoV-2 laboratory designations * *Confirmed*– detection of SARS-CoV-2 nucleic acid in a clinical specimen * *Presumptive* – detection of antigen or antibody indicative of new or recent infection   1.6 SARS-CoV-2 probable case criteria   * Clinical criteria **AND** epidemiologic evidence with no laboratory testing; **OR** * Presumptive lab designation **AND** either clinical criteria or epidemiologic evidence.   *Note: clinicians should routinely review relevant jurisdictional health authority guidelines*   * ECDC – [https://www.ecdc.europa.eu/en/COVID-19/surveillance/case-definition](https://www.ecdc.europa.eu/en/covid-19/surveillance/case-definition) * UK – [https://www.gov.uk/government/collections/coronavirus-COVID-19-list-of-guidance#guidance-for-health-professionals](https://www.gov.uk/government/collections/coronavirus-covid-19-list-of-guidance#guidance-for-health-professionals) * US – [https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-COVID-19/case-definition/2020/](https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-definition/2020/) * WHO – [https://www.gov.uk/government/collections/coronavirus-COVID-19-list-of-guidance#guidance-for-health-professionals](https://www.gov.uk/government/collections/coronavirus-covid-19-list-of-guidance#guidance-for-health-professionals) |
|  | **Infection Prevention and Control in the Medical Center**   * 1. While working, Medical staff should always wear an N95 face mask or equivalent, and appropriate transmission-based PPE during patient encounters [e.g., gloves, goggles, gown].   2. Ensure a surgical face mask is worn by all patients presenting to the Medical Center.   3. Practice physical distancing with all patients and staff to the extent practical.   4. Immediately separate, into a designated treatment room, all ARD patients that present to the Medical Center.   5. Minimize the number of Medical team members assigned to treat ARD patients.   6. For PPE recommendations, refer to company specific policy. |
|  | **Triage, Risk Factors, and Diagnostic Testing**  3.1 Triage   * All ARD patients should be clinically assessed and categorized as ARI, ILI, or SARS-CoV-2 (suspected or confirmed) and recorded in the ship’s ARD surveillance log.   + *Refer to Section 1 Acute Respiratory Disease (ARD) Case Definitions* * Perform and record vital signs, including temperature, pulse, oxygen saturation, and respiratory rate. * Patients meeting clinical criteria for SARS-CoV-2 should be risk assessed for likelihood of SARS-CoV-2 based on available epidemiologic and laboratory evidence.   + Refer to[**SSMED-1609-A1 ARD Clinical Management Algorithm**](https://vikand-my.sharepoint.com/:b:/r/personal/paul_morgan_vikand_com/Documents/VVMED%20New/Marella%20Procedures/MRMED-1609-A1%20ARD%20Clinical%20Management%20Algorithm_2020_SEPT_v0.pdf?csf=1&web=1&e=I4Chd2) * Evaluate prior exposure risks to SARS-CoV-2 patients and probability of diagnosis.   3.2 Risk Factors for Severe Illness   * Assess and document severity of illness and progression at least daily:   + *Mild – mild symptoms not requiring supplemental oxygen*   + *Moderate – Oxygen saturation ˂92% requiring supplemental oxygen to maintain saturation ≥89%*   + *Severe – dyspnea, hypoxia, or ˃50% lung involvement on imaging*   + *Critical – respiratory failure, shock, or multiorgan system dysfunction* * Prioritize patients with severe or progressive illness, and persons in high risk groups. * Persons at increased risk for severe illness:   + UK – <https://www.nhs.uk/conditions/coronavirus-covid-19/people-at-higher-risk/whos-at-higher-risk-from-coronavirus/>   + US – <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/index.html> * Evaluate prior exposure risks to SARS-CoV-2 patients and probability of diagnosis.   3.3 Diagnostic Testing   * All CLI and ILI patients should be tested for SARS-CoV-2 and influenza.   + Notify shoreside VIKAND Manager, Shipboard Medical Operations (MSMO) via telephone of all CLI and ILI patients tested for SARS-CoV-2.   + If VIKAND MSMO unavailable, call VIKAND Medical Emergency Line at +1-754-715-5026 * Co-infection with SARS-CoV-2 and other respiratory viruses, including influenza, has been reported. Therefore, detection of another respiratory pathogen does not rule of SARS-CoV-2. * For all severe patients and pneumonias, consider Legionella urinary antigen testing and chest x-ray. * Diagnostics for SARS-CoV-2:   + Requires detection of SARS-CoV-2 by reverse transcription polymerase chain reaction (RT-PCR) testing.   + Antigen tests are commonly used in the diagnosis of respiratory pathogens, including SARS-CoV-2 (<https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html>). Negative results cannot exclude SARS-CoV-2 infection and may require a supporting RT-PCR test.   + Antibody testing should not be used to diagnose active infection.   + EU – <https://www.ecdc.europa.eu/en/covid-19/latest-evidence/diagnostic-testing>   + US – <https://www.cdc.gov/coronavirus/2019-ncov/hcp/testing-overview.html> * Diagnostics for ILI:   + Influenza testing may be repeated at 24 and 48 hours if influenza is clinically suspected and the first test is negative.   + Medical staff should maintain a minimum par level of influenza diagnostic tests. Considerations for par levels include ship population size, usage rate, and itinerary.   + US – <https://www.cdc.gov/flu/professionals/diagnosis/clinician_guidance_ridt.htm> * WHO - <https://www.who.int/influenza/patient_care/clinical/en/> |
|  | **Treatment and Isolation**   * 1. Treatment   2. SARS-CoV-2 * Document management decisions, including where patients decline treatment. * Where SARS-CoV-2 is suspected or confirmed, refer to treatment guidelines:   + UK – <https://www.gov.uk/government/collections/wuhan-novel-coronavirus#guidance-for-the-management-of-possible-or-confirmed-cases>   + US – <https://www.covid19treatmentguidelines.nih.gov/>   + WHO – <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/patient-management> * Many patients presenting with mild to moderate disease can be managed in a designated isolation cabin with at least twice daily medical assessments. * Patients with severe disease may require admission. * Consider early medical disembarkation to a higher level of care for patient’s exhibiting respiratory compromise and/or worsening condition. Consult with Vikand Chief Medical Officer if needed anytime. VIKAND Medical Emergency Line: +1-754-715-5026   4.3 ILI   * Where ILI is suspected or confirmed, refer to treatment guidelines:   + US – <https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm>   + WHO – <https://www.who.int/influenza/patient_care/clinical/en/> * For ILI, confirmation of influenza by diagnostic testing is not required for decisions to prescribe antivirals. If clinically indicated, initiation of empiric Tamiflu treatment should commence. * Antiviral treatment is most effective if initiated within 48 hours of symptom onset and prescribed for 5 days. * High risk patients should be counseled about the benefits and adverse effects of antivirals, the potential for continued susceptibility to influenza virus infection after treatment is complete, and the need to urgently seek medical care should symptoms persist or worsen. * Antivirals chemoprophylaxis should be administered to close contacts within 48 hours of exposure to a patient with ILI and may be prescribed for up to 10 days. * Antiviral chemoprophylaxis is recommended for:   + High risk group for complications of influenza and who are a close contact of a person with influenza during the infectious period.   + Medical staff who have had high risk close contact exposure to a person with influenza during the infectious period.   + Cabin mates of persons with ILI symptoms. * Antivirals should not be used for post exposure chemoprophylaxis in healthy children or adults based on potential exposures.   1. Isolation and Precautions * Recommendations for isolation and discontinuation of transmission-based precautions for patients with suspected or confirmed communicable illness reflect evidence-based practices within the context of an evolving pandemic. Vikand will continue to closely monitor health authority guidelines and update Medical staff as appropriate. * For most symptomatic persons with ARD, isolation and precautions can generally be discontinued:   + 10 days after symptom onset, **AND**   + Resolution of fever for at least 24 hours [without antipyretics], **AND**   + Improvement of other symptoms,   + Repeat RT-PCR is not required for release.   For asymptomatic persons with confirmed SARS-CoV-2, if no symptoms develop, isolation and other precautions may be discontinued 10 days from the date of their first positive RT-PCR. |
|  | **Close Contact Identification and Quarantine**  5.1 Identification   * Close contact with a suspected or confirmed SARS-CoV-2 patient includes physical contact within 6 feet and for ≥15 minutes cumulative exposure over a 24 hour period (from 2 days prior to illness onset). * For contacts of asymptomatic RT-PCR positive individuals, close contact should be reviewed from 2 days prior to positive SARS-CoV-2 specimen collection. * Identify and interview contacts to assess for symptoms, risk factors, and exposure. Document close contact tracing. * Evaluation of contacts may vary depending on the type and extent of exposure.   5.2 Quarantine   * Close contacts of ARD patients should be precautionarily quarantined until a clinical risk assessment is conducted to evaluate the likelihood of SARS-CoV-2 in the patient. * Close contacts of confirmed SARS-CoV-2 patients should be:   + Quarantined for 14 days from last known exposure to the symptomatic positive SARS-CoV-2 patient or for a period as required by jurisdictional health authorities   + Undergo twice daily medical evaluations   + Contacts that develop ARD symptoms should be isolated and treated * Close contacts of an ARD patient that tested negative via RT-PCR and are assessed as low clinical suspicion for SARS-CoV-2:   + Conduct clinical assessment of the close contact and consider releasing from quarantine if the close contact remained asymptomatic. * Where close contacts are released from quarantine less than 14 days from last known exposure to a patient, the following additional precautions should be implemented for up to 14 days:   + Clinically evaluate and review for symptoms prior to release   + Always wear a face mask when outside their cabin   + For crew, remain in their cabin when not working, including for meals   + Assign to duties that minimize social or physical interactions. If working in food service areas, assign to activities that exclude ready-to-eat preparation and delivery. * Guidance on contact tracing:   + ECDC - <https://www.ecdc.europa.eu/en/covid-19-contact-tracing-public-health-management>   + US – <https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/overview.html> |
|  | **Specimen Collection and Management**   * For SARS-CoV-2 clinical specimen guidance, refer to:   + EU – <https://www.ecdc.europa.eu/en/covid-19/latest-evidence/diagnostic-testing>   + US – <https://www.cdc.gov/coronavirus/2019-nCoV/lab/guidelines-clinical-specimens.html> * For ILI clinical specimen guidance, refer to:   + EU –<http://www.shipsan.eu/Home/EuropeanManual.aspx>   + US – <https://www.cdc.gov/flu/professionals/diagnosis/info-collection.htm> |
|  | **Documentation and Reporting**  7.1 Documentation   * A standardized ARD surveillance log for each voyage should be maintained and updated at least daily by Medical staff.   + For ARD log data requirements, refer to *Acute Respiratory Disease Surveillance Log* template * The ship’s ARD log, surveillance and contact tracing forms, and health declaration questionnaires should be maintained onboard for at least 12 months or per company specific retention policy. * Electronic versions of these records are acceptable. * Records should be accessible for review by relevant health authorities.   7.2 Health Authority Reporting   * A Maritime Declaration of Health (MDH) is required by many countries at least 24 hours prior to arrival from a foreign port. * Region specific reporting:   + EU – <http://www.shipsan.eu/Home/EuropeanManual.aspx>   + US – <https://airc.cdc.gov/surveys/?s=PNFPJY8MJT> |

[**SSMED-1609-A1 ARD Clinical Management Algorithm**](https://vikand-my.sharepoint.com/:b:/r/personal/paul_morgan_vikand_com/Documents/VVMED%20New/Marella%20Procedures/MRMED-1609-A1%20ARD%20Clinical%20Management%20Algorithm_2020_SEPT_v0.pdf?csf=1&web=1&e=I4Chd2)