

MERS Specimen Collection CHECKLIST

	Task	Criteria	Completed
1.	Patient preparation	<ul style="list-style-type: none"> • Ensure that patient under investigation (PUI) is in an appropriate setting: airborne infection isolation room (AIIR) • If not in an AIIR space, ensure that patient is wearing a surgical mask 	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.	Approval and orders	<ul style="list-style-type: none"> • Ensure that approval to conduct MERS testing is received from NYC DOHMH and testing requisition is completed • Physician enters a specimen test order and prints two sets of all labels 	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.	Specimens to be taken	<ul style="list-style-type: none"> • Determine specimens types to collect in consultation with NYC DOHMH based on the number of days between specimen collection and symptom onset & symptoms at time of specimen collection* <p>A. Respiratory Specimens</p> <ul style="list-style-type: none"> • Upper respiratory tract <ul style="list-style-type: none"> ○ Nasopharyngeal swabs and Oropharyngeal swabs, or ○ Nasopharyngeal wash/aspirate or nasal aspirates • Lower respiratory tract <ul style="list-style-type: none"> ○ Bronchoalveolar lavage, or ○ Tracheal aspirate, or ○ Pleural fluid, or ○ Sputum <p>B. Blood Components</p> <ul style="list-style-type: none"> • Serum 	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.	Specimen Collection Materials	<ul style="list-style-type: none"> • Gather MERS specimen collection materials¹: <ul style="list-style-type: none"> • Two swab sets to collect NP and OP specimens • One specimen collection tube containing viral transport media • One serum separator (red top) tube to collect serum • One sterile leak proof container to collect lower respiratory specimens 	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.	Staff PPE	Don Special Pathogen Level 1 Ensemble (including surgical gown, N95 respirator mask, 2 pairs of nitrile gloves with extended cuffs, and face shield) as instructed in the Special Pathogens Level 1 PPE Donning Checklist before entering the patient's room	<input type="checkbox"/> Yes <input type="checkbox"/> No

¹ Under some circumstances, the Department of Health and Mental Hygiene or the Public Health Lab may require two full sets of all of specimens.

	Task	Criteria	Completed
6.	Respiratory Specimen Collection	<p>A. Bronchoalveolar lavage, tracheal aspirate, pleural fluid:</p> <ol style="list-style-type: none"> 1. Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container. <p>B. Sputum:</p> <ol style="list-style-type: none"> 1. Have the patient rinse the mouth with water and then expectorate deep cough sputum directly into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container. <p>C. Nasopharyngeal swabs (NP):</p> <ol style="list-style-type: none"> 1. Use a flexible fine-shafted aluminum swab with a polyester tip (Dacron or rayon, not cotton). 2. Insert a swab into the nostril parallel to the palate. Leave the swab in place for a few seconds to absorb secretions 3. Slowly withdraw swabs with rotating motion. 4. Swab BOTH nasopharyngeal areas. 5. Place tip of both swabs into a vial containing 2-3mL of virus transport medium and cut the shaft. 6. NOTE: NP/OP specimens can be combined, placing BOTH swabs into the SAME VIAL.  <p>D. Oropharyngeal swabs (OP):</p> <ol style="list-style-type: none"> 1. Swab the posterior pharynx, avoiding the tongue. 2. Place tip of the swab in the SAME vial containing 2-3mL of virus transport medium and cut the shaft. <p>E. Nasopharyngeal wash/aspirate or nasal aspirates:</p> <ol style="list-style-type: none"> 1. Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container. 	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
7.	Blood Components Specimen Collection	<p>A. Serum</p> <ol style="list-style-type: none"> 1. Use SST blood tube 2. The minimum amount of serum required for MERS-CoV testing (either serologic or rRT-PCR) is 200 µL. If both MERS-CoV serology and rRT-PCR tests are planned, the minimum amount of serum required is 400 µL (200 µL for each test). <p>Children and adults: Collect 1 tube (5-10 mL) of whole blood in a serum separator tube.</p> <p>Infant: A minimum of 1 mL of whole blood is needed for testing pediatric patients. If possible, collect 1 mL in a serum separator tube.</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>

References:

- *Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Patients Under Investigation (PUIs) for Middle East Respiratory Syndrome Coronavirus (MERS-CoV) – Version 2.1.* Accessed online at <https://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html>; Accessed on 4/20/2018
- New York City Health+Hospitals/Bellevue Special Pathogens Program: *MERS Specimen Collection and Transport Protocol* (June 2016)

	Task	Criteria	Completed
8.	Packaging	<ul style="list-style-type: none"> Place the specimen vial into a labeled biohazard bag 	<input type="checkbox"/> Yes <input type="checkbox"/> No
9.	Cleanup	<ul style="list-style-type: none"> Dispose of remaining waste into appropriate receptacles 	<input type="checkbox"/> Yes <input type="checkbox"/> No
10.	Documentation	<ul style="list-style-type: none"> Label all specimens with the patient's first and last name, date of birth, type of specimen, and date and time of collection Complete one Public Health Laboratory (PHL) Test Request Form¹ for EACH specimen 	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.	Delivery to Central Accessioning Room/Lab	<ul style="list-style-type: none"> Hand-deliver the specimen to the lab including PHL forms; do not send through the pneumatic tube system 	<input type="checkbox"/> Yes <input type="checkbox"/> No
12.	Facility's Central Accessioning Room/Lab	<ul style="list-style-type: none"> Central Accessioning Room/Lab staff to centrifuge the serum sample and parafilm the top to secure the cap Specimens will be packaged as follows: <ol style="list-style-type: none"> Individually bagged tubed samples will be placed into bio-hazard bags and placed in bubble wrap The leak-proof lower respiratory contained will be placed into a bio-hazard bag All bagged specimens to be placed into individual Tyvek envelopes. Tyvek Envelops to be placed into a UN3373 Cat B Biological Substance container Once packaged, contact NYCDOHMH Provider Access Line at 1-866-692-3641 to arrange for delivery <p>If samples are unable to be shipped within 72 hours of collection, they should be stored at -70°C and shipped on dry ice.</p>	

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