

of using MRSA screening results for targeted decolonization resulted in lower costs compared with screening followed by contact precautions.⁶ Perhaps most interestingly, the same analysis demonstrated that a strategy of universal decolonization without MRSA screening had the lowest intervention costs and best efficacy.⁶ The results suggest that MRSA screening may not be required in an intensive care unit setting with universal chlorhexidine bathing. Although the REDUCE MRSA trial is based on intensive care unit costs and benefits, ongoing work is being conducted to explore the impact of decolonization and need for MRSA screening in the broader hospital setting.

Overall, we agree with O’Riordan and colleagues¹ in their assessment of the literature to support “generally advocating” for MRSA screening as it relates to “infection and control measures.” In particular, understanding the changing epidemiology of MRSA is not fully possible without screening. Depending on the context, available resources, and comparison group, the available data support a benefit to the overall healthcare system for MRSA screening followed by contact precautions. Nevertheless, additional work is needed to understand the role of MRSA screening in the context of additional “infection and control measures,” particularly in the context of universal decolonization where screening may not be required.

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An Adult Returned Traveler from Dubai Hospitalized with an Influenza-Like Illness (ILI): Middle East Respiratory Syndrome (MERS) or Influenza? Infection Control Implications from a Near MERS Case

To the Editor—Middle East respiratory syndrome (MERS) is a zoonotic pneumonia caused by coronavirus (MERS-CoV) that emerged from the Middle East. MERS presents as an influenza-like illness (ILI) that is difficult clinically to differentiate from influenza (Table 1).¹ When a woman, recently returned from Dubai, was admitted with an ILI, we still had concerns of possible Ebola in returning travelers and we were in the midst of an influenza A (H₃N₂) epidemic. This potential case of MERS vs influenza emphasized the importance of appropriate infection control (IC) precautions.²

Some 10 days after returning from Dubai, a 41-year-old woman became ill. It was not known whether she had transited West Africa. She visited a practitioner complaining of chills, myalgias, sore throat, dry cough, and nausea/vomiting. The practitioner informed the local Department of Health (DOH) that she could be a MERS case, and DOH suggested evaluation at our hospital. She was admitted to the Emergency Department as a potential MERS case and was placed on airborne and contact precautions; then she was transferred to the Infectious

TABLE 1. Clinical Features of MERS and Influenza¹

Clinical and Epidemiologic Aspects	MERS-CoV	Influenza A
Feature		
Influenza-like illness (ILI)	+	+
Nosocomial transmission	+	+
Median incubation period	5.2 d (1.9–14.7 d)	2 d (1–7 d)
Contagiousness	+	+++
Virulence/Lethality	+++	+
IC Precautions	Airborne + Contact	Droplet + Contact
Symptoms		
Headache	+	+
Fever and chills	+	+
Fatigue	+	+
Myalgias	+	+
Dry cough	+	+
Sore throat	+	+
Nausea/vomiting	+	+/-
Diarrhea	+/-	+/-
Abdominal pain	+/-	-
Signs		
Decreased breath sounds	+/-	+/-
Acute renal failure (ARF)	+/-	-
Laboratory Tests		
Normal WBC count	-	+
Leukopenia	+	- ^a
Relative lymphopenia	+	+
Thrombocytopenia	+	+
Elevated serum transaminases	+	+/-
Elevated LDH	+	-
Elevated creatinine	+	-
Chest Film		
Normal/minimal basilar infiltrates (early)	+	+
Bilateral infiltrates (late)	+	+
Pleural effusion (small)	+	+/-
ARDS (severe cases)	+	+

NOTE. MERS, Middle East respiratory syndrome; CoV, coronavirus; LDH, lactic acid dehydrogenase; ARDS, adult respiratory distress syndrome.

^aUnless severe.

Disease Containment Unit (IDCU). The IDCU was designed for potential Ebola patients before transfer to a DOH-designated Ebola treatment center (ETC). While Ebola is highly contagious and highly lethal, MERS is often fatal but is much less contagious than Ebola. IDCU healthcare workers (HCWs) were educated on IC precautions for MERS but viewed MERS as an Ebola-like infection.

Physical examination revealed an injected oropharynx. In hospital, she continued to have nausea/vomiting but no fever or diarrhea. DOH requested a chest x-ray (CXR) and nasopharyngeal swabs for MERS-CoV PCR testing. Nasopharyngeal swabs were obtained, and specimen forms for MERS-CoV PCR testing were filled out. Using a point-of-care test kit designed for Ebola patients, limited blood tests were obtained (eg, white blood cell count, hemoglobin/hematocrit, electrolytes); all results were unremarkable. A CXR was not initially obtained because radiology technicians had not yet completed IDCU training procedures. Even with IC

reassurance and education, IDCU HCWs maintained Ebola-level precautions. Over the next 2 days, the patient improved and her myalgias, dry cough, and nausea/vomiting decreased. A CXR was then obtained, and the results were unremarkable. At this point, the local DOH determined that the patient did not meet the MERS case definition: she had no fever and her CXR was negative. Thus, nasopharyngeal swabs for MERS-CoV PCR were not sent for testing.^{1,2} A nasopharyngeal swab was processed for viral film array PCR, and she tested negative for influenza.

Because this patient presented with an ILI, a negative PCR for influenza and other respiratory viral pathogens was difficult to interpret. Our experience has been that nasal swab positivity for influenza is specimen and method dependent, ie, a negative influenza test does not rule out influenza. At the time, the assumption was that if the patient tested positive for influenza, then necessarily she could not have MERS. This distinction was of importance in determining the IC precaution level.

In this case, the IC precaution level was critical because MERS requires airborne and contact precautions, whereas influenza requires droplet and contact precautions. Clinically, she improved, her symptoms resolved, and she was discharged on hospital day 3 without a definite diagnosis.

Epidemiologically, given her recent travel to Dubai, her ILI could have been MERS because she became ill during the MERS incubation period (1.9–14.7 days).^{1–3} Alternately, because this illness occurred during peak influenza season, she could have had influenza. The incorrect operating diagnostic premise was that if the patient tested positive for influenza, she could not have MERS. Unfortunately, this does not appear to be the case. Recently, 5 MERS cases were reported from Iran, and importantly, 2 of these also tested positive for influenza.^{3,4} Clearly, in a returning traveller from an endemic MERS area with an ILI, a positive or negative nasal swab for influenza does not eliminate MERS as a diagnostic possibility. MERS-CoV PCR positivity is highest in distal airways, and nasopharyngeal or proximal respiratory tract specimens may be negative.¹ Optimal specimens for MERS-CoV testing are obtained from distal airway specimens via bronchoscopy, but bronchoscopy was not indicated in this patient.

In a returned traveler presenting with an ILI from a MERS-endemic area, without a definite diagnosis we concluded that it was “better to be safe than sorry” regarding IC precaution levels. HCWs are particularly predisposed to acquiring MERS in caring for hospitalized MERS patients. MERS precautions (airborne and contact) best protects HCWs from MERS-CoV bodily secretion exposures.^{5–9} If she had MERS, influenza precautions (droplet and contact) would have been inadequate.

Recently, it has become apparent that some MERS cases initially have no fever or diarrhea and may have only mild ILI symptoms early. The risk of MERS transmission to HCWs from asymptomatic or mild cases that later become severe, is unknown. Even though she did not fit the classic MERS case definition, we believe that the nasopharyngeal swabs should have been tested for MERS-CoV.¹⁰ Because the patient was in the IDCU, originally designed for Ebola care, HCWs viewed MERS as an Ebola-like infection. Few US hospitals have had MERS patients. We believe this near-MERS experience was an instructive exercise in IC precautions for HCWs caring for patients with potential imported viral zoonotic infections.²

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High Endemic Rates of OXA-23-Producing Carbapenem-Resistant *Acinetobacter baumannii* Isolates Caused by the Persistence of Major Clones in Hospitals in a Brazilian City 5 Years After an Outbreak

To the Editor—*Acinetobacter baumannii* is a major pathogen related to several nosocomial infections, particularly ventilator-associated pneumonia. The worldwide emergence