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Lapses in infection control associated with spread of severe respiratory virus MERS, according to study

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Little is known about the often fatal virus known as Middle East respiratory syndrome coronavirus (MERS-CoV), but researchers have identified gaps in infection control as a major culprit in all eleven published cases involving healthcare-associated transmission of the virus. The full findings of the review can be found in the December issue of the *American Journal of Infection Control*, the official publication of the Association for Professionals in Infection Control and Epidemiology (APIC).

Researchers from the Hellenic Center for Disease Control and Prevention in Athens, Greece, reviewed 252 papers on MERS-CoV, ultimately narrowing their focus to 10 studies covering 11 cases of possible or confirmed healthcare-associated transmission of the virus, which causes severe respiratory disease with a high fatality rate. Although the majority of cases have occurred in Middle Eastern countries since the virus first appeared in 2012, there have also been documented cases in Europe, Africa, and the United States. Two out of three affected patients have been male, with a median age of 49 years.

Healthcare workers (HCW), particularly nurses, are at heightened risk of acquiring MERS-CoV from infected patients from the environment and also through person-to-person contact. The virus has been shown to survive for at least 48 hours on hospital surfaces, and is transmissible through vomit and diarrhea, which present in roughly one-third of cases.

MERS-CoV has been detected for up to 16 days in respiratory specimens and stool, and up to 13 days in urine.

"Patients with confirmed or suspected MERS-CoV infection should be cared for under contact and droplet precautions until testing results," the authors stress. According to WHO guidelines, this includes wearing a high protection mask (e.g., N95 respirator), eye goggles, gowns, and gloves during aerosol-generating procedures. The U.S. Centers for Disease Control and Prevention recommends use of respirator masks when in contact with any MERS-CoV patient (suspected or confirmed).

Although the World Health Organization has identified infection control gaps within healthcare facilities as the reason behind these outbreaks, further research is needed to confirm whether these gaps concern the use of personal protective equipment, hand hygiene, procedures, environmental cleaning, or triage.

More information: "Middle East respiratory syndrome coronavirus: Implications for health care facilities," by Helena C. Maltezou and Sotirios Tsiodras appears in the *American Journal of Infection Control*, Volume 42, Issue 12 (December 2014).

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