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EDITORIAL

MERS CoV: A trigger for healthcare transformation

The most recent MERS outbreak affected a prestigious tertiary care hospital known for its well-established Infection Control Program (ICP). The hospital is located in the capital of Saudi Arabia. The outbreak was associated with 82 confirmed MERS CoV cases, and more than 5000 healthcare workers (HCWs) were screened for the virus. The hospital followed a written Infectious Disease Epidemic Plan for MERS CoV (IDEP) that was established by the outbreak committee in early 2014. The outbreak was resolved quickly. The 1200 bed hospital has one of the largest Emergency Departments (ED) in the Middle East and has more than 250,000 visits a year. Furthermore, the hospital has an outpatient service that accommodates 2000 visits a day and over 9000 deliveries a year.

The hospital has a well-established ICP and was designated the Gulf Corporate Council Center for Infection Control (GCC-IC) in 2004. Additionally, the hospital has served as a WHO Infection Control Collaborating Center for the past 6 years. Thus, it is unclear what happened during this specific MERS outbreak. The hospital was able to accommodate 14 primary MERS CoV cases in 2014. There was no secondary transmission to healthcare providers or secondary transmission in the hospital. Conversely, the recent outbreak was caused by a few primary cases that were hosted in the busy ED. These infected patients transmitted the infection to a significant number of susceptible patients also receiving care in the crowded ED. The hospital implemented the IDEP plan and a detailed escalation process, which requires discontinuation of all health care services provided to patients. The hospital closure was announced on August 18, 2015. While an elaborate plan was quickly developed to accommodate patients in need of urgent care, a parallel process involving an in-depth analysis of how care is provided to patients was ongoing because the reopening of the hospital was imminent. There was a clear sense of urgency while the leadership addressed these issues. The culture of the organization was tested by this virus outbreak.

An exposed patient that became symptomatic on August 28, 2015, was the last case to be identified during this virus outbreak. The hospital announced the cessation of the outbreak 4 weeks later. There were significant changes following the outbreak, and bold steps were announced during a town hall meeting that took place in September. The meeting was given the title ''Planning for the Future''. The leadership addressed three major themes. These themes will be a major part of healthcare transformation at the institution. The first theme addresses IC. The knowledge gaps in basic IC concepts and the lax compliance to IC policy were addressed. An ambitious education and competency based program was launched on September 28, 2015. All 9000 bedside healthcare providers are expected to be certified by the newly developed program. Scrutiny of the rules and accountability are being addressed, and a culture of respect will be emphasized. The second theme addresses challenges in providing care in the busy ED. The improvement process adopted the theme of ''Zero-Transmission and Care with Dignity''. The core of the ED transformation is to increase suspicion of potentially infectious patients and promptly isolate and diagnose them. Additionally, creating indicators to monitor the length of stay in the ED will improve accountability and patient treatment. Furthermore, the capacity of the ED to accommodate

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larger numbers of patients requiring airborne isolation will be increased. This includes a modified triage system for patients with Acute Respiratory Infection (ARI) and restructuring 5 rooms as negative pressure rooms within the ED. There will also be an independent 18-room airborne isolation facility, and an innovative drive through triage system was established at the first encounter of patients arriving by car at the ED. A second triage site was established within the entrance of ED to ensure proper and prompt isolation of patients with suspected ARI. The final and most challenging theme addresses redesigning the patient flow for hospitalized patients. The Quality and Patient Safety Department (QPS) will lead this initiative. A transformation of bedside care focusing on the major departments of Surgery, Obstetrics & Gynecology, and nursing will be included in the first wave of the transformation process.

While the intricacies of managing the outbreak that required halting services to patients required careful management skills, recovering from the process imposed by the outbreak will require equal skill. The chairman of the CCC frequently started the bi-daily meetings with a famous quote by Weick and Sutcliffe authors of Managing the Unexpected ''the unexpected is a brutal audit to our resilience and reliability''. It is now time to prove that a transformation is possible.

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