

Abstract

Background

Although health care–associated infections are an important cause of morbidity and mortality worldwide, the epidemiology and etiology of respiratory health care–associated infections (rHAIs) have not been documented in Kenya. In 2010, the Ministry of Health, Kenya Medical Research Institute, and Centers for Disease Control and Prevention initiated surveillance for rHAIs at 3 hospitals.

Methods

At each hospital, we surveyed intensive care units (ICUs), pediatric wards, and medical wards to identify patients with rHAIs, defined as any hospital-onset (≥ 3 days after admission) fever ($\geq 38^{\circ}\text{C}$) or hypothermia ($< 35^{\circ}\text{C}$) with concurrent signs or symptoms of acute respiratory infection. Nasopharyngeal and oropharyngeal specimens were collected from these patients and tested by real-time reverse transcription polymerase chain reaction for influenza and 7 other viruses.

Results

From April 2010–September 2012, of the 379 rHAI cases, 60.7% were men and 57.3% were children < 18 years old. The overall incidence of rHAIs was 9.2 per 10,000 patient days, with the highest incidence in the ICUs. Of all specimens analyzed, 45.7% had at least 1 respiratory virus detected; 92.2% of all positive viral specimens were identified in patients < 18 years old.

Conclusion

We identified rHAIs in all ward types under surveillance in Kenyan hospitals. Viruses may have a substantial role in these infections, particularly among pediatric populations. Further research is needed to refine case definitions and understand rHAIs in ICUs.