Ebola outbreak heightens infection control awareness

By Prof. Lakshman Samaranayake

Twenty-two years ago, a seminal report from the Institute of Medicine (IOM) in the U.S., titled “Emerging Infections: Microbial Threats to Health in the United States,” warned of the dangers of newly emerging and re-emerging diseases. The concept of “emerging infectious diseases,” introduced then by the IOM, is now well entrenched, and to our chagrin we have witnessed many such diseases over the past two decades. These include variant Creutzfeldt-Jakob disease/bovine spongiform encephalopathy, severe acute respiratory syndrome, Middle East respiratory syndrome and, above all, the pandemic of tuberculosis. According to the IOM report, there are many reasons that new diseases emerge and re-emerge. These include healthcare advances with the attendant problems (e.g. transplantation, immunosuppression, antibiotic abuse, and contaminated blood and blood products) and human behavior, including injectable drug abuse and sexual promiscuity. Environmental factors, such as economic impoverishment, war and civil conflict, too, are critical, according to the IOM. The current outbreak of Ebola virus infection. It is back with a vengeance, this time in West Africa, with more than 3,500 confirmed cases at press time and a 69 percent case fatality ratio (at the time of writing). The culprit is the Zaire Ebola virus species, the most lethal Ebola virus known, with case fatality rates up to 90 percent. According to the IOM report, there are many reasons that new diseases emerge and re-emerge. These include healthcare advances with the attendant problems (e.g. transplantation, immunosuppression, antibiotic abuse, and contaminated blood and blood products) and human behavior, including injectable drug abuse and sexual promiscuity. Societal occurrences, such as economic impoverishment, war and civil conflict, too, are critical, according to the IOM. The current

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The researchers investigated population trends in edentulism among U.S. adults at least 15 years of age by creating time-series data from five national cross-sectional health surveys: 1957–1958 (100,000 adults), 1971–1975 (14,655 adults), 1988–1998 (18,011 adults), 1999–2002 (12,336 adults) and 2009–2012 (10,522 adults). Birth cohort analysis was used to isolate age and cohort effects. Geographic and socio-demographic variation in prevalence were investigated using a sixth U.S. survey of 432,519 adults conducted in 2010. Prevalence through 2050 was projected using age cohort regression models with simulation of prediction intervals. See EDENTULISM, page A5

Researchers predict that the number of people in the United States with tooth loss will be 30 percent lower in 2050 than it was in 2010. Photo/Dana Rothstein, www.dreamstime.com.

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