



is because from a clinician's standpoint, we've identified applications of these devices which a device sponsor may not feel is a large enough market to do their own study."

To pay for the ACC and STS study, Holmes said there should be some direct support from Edwards Lifesciences and educational grants to the societies by the valve maker, with cer-

tain conditions. "Industry has some fiduciary duties and needs some access to the data, but we need to make sure there are firewalls that mitigate any conflicts of interest," he said. □

# Lessons Learned From SARS Outbreak Prompt Rapid Response to New Coronavirus

Bridget M. Kuehn, MSJ

**T**HE EMERGENCE OF A NOVEL AND deadly coronavirus in Saudi Arabia last fall stirred up memories of the 2003 outbreak of severe acute respiratory syndrome (SARS), which emerged in Asia and quickly spread around the world. Ultimately, more than 8000 people became ill during the SARS epidemic, and about 10% of them died.

But this time around, public health authorities and researchers were primed to respond more rapidly to contain the potential threat. Public health authorities in the affected areas and international agencies have been sharing information about the outbreak with one another and the public, and researchers around the world have also been pulling together, sharing samples and other findings.

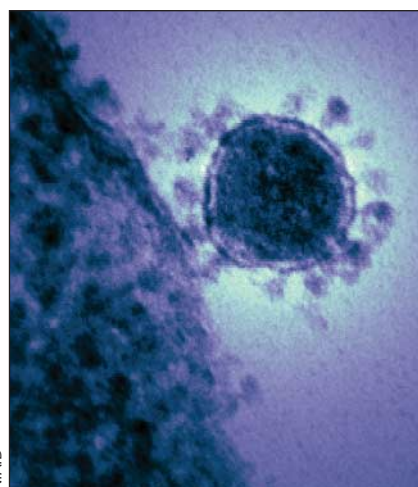
## ALARM BELLS GO OFF

The similarities between the newly identified coronavirus and SARS, as well as the apparently high mortality rate associated with the new virus, triggered immediate concern from public health authorities, according to Miles W. Carroll, PhD, of the UK Health Protection Agency.

"Respiratory pathogens are much more concerning because of the route of transmission," said Carroll.

At press time, there had been 14 laboratory-confirmed cases of the novel coronavirus and 8 deaths, according to the US Centers for Disease Control and Prevention (CDC). Most of the cases were identified on the Arabian

Peninsula, but 3 of them were in the United Kingdom. Person-to-person transmission has been documented both in the United Kingdom and Jordan, according to Carroll. In the United Kingdom, the index patient was an individual who developed



The identification of a novel coronavirus in humans in the Middle East and the United Kingdom has triggered concern.

a severe respiratory illness before his return to the United Kingdom after a trip to Saudi Arabia and Pakistan. Subsequently, 2 contacts of this individual became ill, according to a report from the CDC ([http://www.cdc.gov/mmwr/preview/mmwrhtml/mm62e0307a1.htm?s\\_cid=mm62e0307a1\\_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm62e0307a1.htm?s_cid=mm62e0307a1_e)). One developed a mild illness and recovered; the other had a preexisting medical condition and died after developing a severe respiratory infection.

Carroll noted that there is also evidence of human-to-human trans-

mission leading to 2 deaths in a hospital in Jordan that occurred before the pathogen had been identified. He explained that samples from 2 deceased patients indicated possible spread within the hospital.

"We don't want to alarm people too much," he said. He noted that the virus does not spread very easily from person to person but rather requires close contact as you would see between individuals living together. However, clinicians and public health authorities must be vigilant because the virus could mutate in a way that makes human-to-human spread easier.

The CDC has updated its recommendations for clinicians (<http://emergency.cdc.gov/HAN/han00343.asp>) emphasizing the need to consider the novel coronavirus when treating patients with a severe respiratory illness who have recently traveled to the Arabian Peninsula or who are close contacts of those who have traveled to this region. Suspect cases should be reported to state and local public health authorities, who should then pass the information along to the CDC, according to the recommendations.

## RAPID RESPONSE

In the meantime, virologists around the world are working together to identify the source of the virus and ways to prevent or treat related illness.

Vincent Munster, PhD, head of the Virus Ecology Unit at the National Institutes of Health Rocky Mountain Laboratories in Hamilton, Montana,



and his colleagues have already begun studies of animals infected with the virus. He said there has been a great deal of cooperation, with researchers rapidly disseminating genetic information about the virus, tools for diagnosing the infection, and isolates of the virus to colleagues around the world. He attributed this openness to recognition that international collaboration is crucial in the aftermath of SARS. As a result of this openness, Munster and his colleagues were able to quickly acquire samples of the virus to begin studying it.

Munster explained that initial attempts by his group to use hamsters as a model failed, and the group has instead had to use nonhuman primates. So far, the infected animals have developed mild to moderate respiratory

illness, and none has died. His team hopes to be able to test potential treatments and preventive measures, such as prophylaxis or vaccines. As a specialist in virus ecology, Munster is also interested in understanding the evolution of this virus and how it came to infect humans. Palm civets, a small Asian mammal, acted as a reservoir for the SARS virus. The animal reservoir for the newly identified coronavirus was unknown at press time; however, Munster noted that the virus is closely related to coronaviruses that infect bats.

Munster said it has been interesting to see how quickly the new virus spread from the Middle East to the United Kingdom.

"It's important that we keep a focus on what's going on in the world," he said. □

## Guideline: Tailor Appraisal of Concussion During Sports

Mike Mitka, MSJ

USE OF TRADITIONAL GRADING systems to evaluate the severity of a possible sport-related concussion should be eliminated in favor of more nuanced individualized assessment and follow-up care of injured athletes, according to an updated guideline from the American Academy of Neurology (Giza CC et al. *Neurology*. doi:10.1212/WNL.0b013e31828d57dd [published online March 18, 2013]).

The update recommends immediately removing from play athletes with suspected concussion and returning them to play only after they have been assessed by a licensed health care professional trained in concussion assessment and treatment. Following a concussion, the athlete's return to play should be gradual and only after all acute symptoms are gone. In addition, athletes of high school age and younger who experience a concussion should be

managed more conservatively, as evidence suggests it takes them longer to recover than college athletes.

"We've moved away from the concussion grading systems we first established in 1997 and are now recommending concussion and return to play be assessed in each athlete individually," said guideline coauthor Christopher C. Giza, MD, of the David Geffen School of Medicine at the University of California, Los Angeles, in a release. "There is no set timeline for safe return to play."

The guideline notes that athletes with a history of 1 or more concussions are at higher risk for being diagnosed with another such injury and that the first 10 days after a concussion appears to be the period of greatest risk for a subsequent concussion.

The risk of concussion in young male athletes is greatest in football, rugby, hockey, and soccer. The risk of concussion for young women and girls is greatest in soccer and basketball. □

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#### Breast Cancer Concern

Over the past 30 years, diagnoses of advanced breast cancer reportedly have increased among young US women, a trend not seen in older women.

The numbers remain small, but the finding raises concerns. Breast cancer in young women tends to be more aggressive and is associated with lower survival rates than breast cancer in older women. Researchers reported that in 1976, the diagnosis rate of metastatic breast cancer among women aged 25 to 39 years was 1.53 cases per 100 000 women; by 2009, the rate had climbed to 2.90 cases per 100 000, an annual increase of 2.07%.

<http://tinyurl.com/b7er7zj>

#### Preventing HIV in Infants

More pregnant and breastfeeding women living with HIV in Malawi started antiretroviral therapy (ART) after the launch of a new program known as Option B+, US health officials reported.



Michael Utech/Stockphoto.com

Data from Malawi's Ministry of Health showed that 1257 pregnant and breastfeeding women started ART in the second quarter of 2011, before Option B+ began. A year later, in the third quarter of 2012, the number rose to 10 663—a 748% increase. Instead of treating pregnant women with HIV infection based on their disease stage or CD4 cell count, the program offers lifelong ART to all pregnant and breastfeeding women with confirmed infection.

<http://tinyurl.com/aohexcq>

#### Top 10 in Patient Safety

Investigators commissioned by the federal Agency for Healthcare Research and Quality issued their "top 10" list of evidence-based strategies to improve patient safety and save lives.

The list includes practicing proper hand hygiene; following a "do-not-use list" for abbreviations that could be misunderstood, leading to medical errors; using barrier precautions such as face masks to prevent health care-associated infections; and preventing ventilator-associated pneumonia through measures such as elevating the head of the patient's bed, temporarily discontinuing sedatives, addressing oral care with chlorhexidine, and suctioning endotracheal tubes. Each year, diagnostic errors result in an estimated 44 000 to 80 000 patient deaths.

<http://tinyurl.com/b6ysstw>

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