



INFECTIOUS DISEASES

WHO Probes Deadliness of China's Pig-Borne Disease

International experts fear that a new, more virulent form of the bacterium *Streptococcus suis* could be responsible for killing 38 humans and more than 600 pigs in China's central Sichuan Province over the past 2 months. But they are puzzled about how a rare—and rarely fatal—disease that usually appears in isolated cases among humans became so deadly and whether it might strike again.

Answering those questions will depend on strengthening collaborations between Chinese researchers and the international community. Additional animal epidemiological studies will be needed in China to determine if and how widely the new strain may be circulating. Jeff Gilbert, a zoonotic disease expert with the World Health Organization (WHO) in Manila, says, “from the human health side, (cooperation) has been fairly impressive, but we're still missing the veterinary information” on the outbreak.

A half-dozen experts on the disease joined technical staff from WHO and international animal health organizations in a private 9 August conference call to review information provided by China's Ministry of Health. The ministry reported that the outbreak peaked in mid-July and that no new cases were reported after 5 August. Of the 204 human cases, there were an unprecedentedly high 38 deaths. Nearly all patients



Outbreak. Questions remain about the swine disease that has killed 38 people in China.

were farmers or butchers who had slaughtered sick pigs or handled the meat.

Tests on both human and animal samples confirmed the presence of *Streptococcus suis* serotype 2 and ruled out other bacterial and viral agents, including influenza and Nipah virus. The ministry found no evidence of human-to-human transmission. WHO

reported publicly last week that experts now accept the ministry's conclusions.

“We have no doubt the identification is correct; it is *Streptococcus suis*,” says Marcelo Gottschalk of the University of Montreal in Canada, who was initially skeptical because of the strange nature of the outbreak. The bacterium is endemic among domestic pigs worldwide but is usually asymptomatic. The Sichuan outbreak is by far the largest ever reported, surpassing a previous outbreak in China's eastern Jiangsu Province in 1998 that killed 14 of 25 human patients and caused the death or culling of 80,000 pigs. (Little is known of this outbreak outside of China because all scientific reports appeared in Chinese journals.)

Gottschalk says the mortality rate far exceeds the 5% to 6% typically seen among sporadic human cases. In addition, most recent victims succumbed to toxic shock, an atypical symptom of the disease. “It is logical to think that this is a more virulent strain that acquired genetic material from other microorganisms,” Gottschalk concludes.

Xu Jianguo, director of the National Institute for Communicable Disease Control and Prevention, a lab affiliated with China's Center for Disease Control and Prevention (CDC) in Beijing, says that sequencing of Sichuan isolates has not turned up new genetic changes. He speculates that the outbreak arose because the type 2 serotype, known to be more virulent than other serotypes, may be becoming more widespread in pigs, increasing the chance of human infection.

To determine whether the bacterium has changed, researchers need to compare both ▶

HIGHER EDUCATION

Princeton Resets Family-Friendly Tenure Clock

Princeton University wants to level the field for tenure-track faculty members starting a family. Starting this fall, both men and women who become parents will receive an automatic tenure extension. This first-of-its-kind policy is seen as one way to help boost the number of tenured women in science and engineering departments. But some say the policy could provide an unfair advantage to scholars who are not the primary caregivers.

Many universities, including Princeton, already allow new parents to request extra time for tenure decisions. But studies show that many women (and men) worry that asking might be seen as showing a lack of

commitment to academic life (*Science*, 17 December 2004, p. 2031). “There is a feeling among assistant professors that stopping the clock could hurt your chances of getting tenure,” says Princeton psychologist Joan Girgus, who chaired a 2003 campus report that recommended changing the current policy. Assistant professors at the university will now automatically receive one additional year for every child born or adopted, although they can request an early tenure review.

Lisa Wolf-Wendel, a sociologist at the University of Kansas in Lawrence who studies gender issues, says the impact of the new policy is hard to predict. “If going up early for

tenure ends up becoming the norm, then you haven't solved the problem,” she says, adding that the policy could end up favoring men with stay-at-home wives or partners who do the actual work of childrearing. “An extension would allow them to be more academically productive,” she notes.

One solution, in the works at the University of California, would give automatic extensions to those with “substantial caregiving responsibilities,” says Marc Goulden, an analyst at UC Berkeley's graduate division. The policy would require faculty members to submit a letter attesting to that status.

—YUDHIJIT BHATTACHARJEE

CREDIT: AP PHOTO