Disease outbreaks in wake of Southeast Asia floods

More than 2000 people have reportedly died and 19 million have been displaced by monsoon floods in regions of India, Nepal and Bangladesh, where outbreaks of diarrhea and other waterborne diseases are now emerging. The stagnant waters are also a lethal breeding ground for vector-borne diseases such as malaria and dengue fever.

The WHO Southeast Asia Regional Office in New Delhi, India is “focusing on strengthening monitoring and surveillance of potential disease outbreak situations. [Nepal, India and Bangladesh] are experiencing heavy flooding and have reported increased cases of water-, vector- and food-borne diseases.” The Indian states of Bihar and Assam are under a close health watch. In Bihar, stagnant waters have put about 11 million people at risk of contracting waterborne diseases.

The UN Children’s Fund (UNICEF) warned that children, who make up 40% of South Asia’s population, are especially vulnerable to the “looming health crisis.”

Doctors treated at least 1500 residents of Uttar Pradesh state for diarrhea in the first 10 days of August, and in Bangladesh, there were 1400 reported cases of diarrhea in 24 hours.

“Safe drinking water is emerging as a major issue in the flood-affected areas,” stated UNICEF. “Most tube-wells have submerged. Many affected people are reportedly using flood water. There seems to be a shortfall in the deployment of medical teams and polythene sheets for shelter.”

“Malnutrition is an important health problem for a large number of flood-affected people, especially children,” added Swapna Jana, secretary of the India-based non-governmental organization, Society for Social Pharmacology. “The plight of these malnourished people has been aggravated due to the lack of food, as a consequence of flood.”

The flooding has displaced some 150 000 people in the Indian state of Uttar Pradesh, and 3 million in Assam. The Indian government has distributed relief supplies and chlorine tablets to

Pavel Rahman, Associated Press

A Bangladesh army medical corps member distributes medicine to flood victims in Dhaka.

purify the water, and sent physicians and other health care professionals.

The United Nations World Food Programme warned that for many of the estimated 25 million people affected by the severe flood, long-term relief and recovery efforts are needed. The UN food program is ready to assist with food and logistical support.

“We urge donors to step forward with funding for early recovery programs, which are crucial in the wake of a crisis,” said Executive Director Josette Sheeran. “After the floodwaters subside, millions of poor families will remain devastated from the loss of their crops, livestock and, in some cases, family members.”

As of Aug. 13 (print deadline), several international aid agencies had launched appeals for funds, including Oxfam (US\$2 million) and the International Federation of Red Cross and Red Crescent Societies (US\$1.7 million). India World Vision is providing safe drinking water and other necessities, and German Agro Action, aided by the German government, raised \$716 000 for relief supplied. The United States government has contributed US\$50 000.

In Bihar state, 880 mm of rain fell in 15 days this season — the heaviest rainfall in the past 30 years. The worst-hit district, Junagadh, received 471 mm of rain in 24 hours, submerging several villages under 1.8 m of water.

The UN World Meteorological Or-

ganisation said the monsoon floods are part of a record for extreme weather conditions since the start of 2007 that includes a summer heat wave in Europe, heavy rains in China and the first documented tropical cyclone in the Arabian Sea. — Sanjit Bagchi MD, Kolkata, India

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Calgary seeks help to identify *E. coli* source

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The Calgary Health Region has called in an epidemiologist with the Public Health Agency of Canada to try to identify the reason for an unusually high number of cases of *Escherichia coli* O157:H7 this summer.

In July and the first part of August, 46 people in the Calgary region were diagnosed with *E. coli* O157:H7. Normally, over that period of time the region would see 5–10 cases resulting from an infection with that strain of the bacteria, says Dr. Brent Friesen, the medical officer of health.

Eleven people were hospitalized as a result of the summer infections, and 6 had developed hemolytic uremic syndrome as of Aug. 10.

The Region asked for and received help from a field epidemiologist with the Canadian Public Health Agency because the medical officer and his staff were unable to trace the *E. coli* to a single source. They were also puzzled because the *E. coli* infections do not appear to be resulting from a specific source, such as the one in Walkerton, Ont., in 2000 that left 2600 people ill and killed 7.

Although the Calgary incidents are not classified as an outbreak, “this is higher than the number of cases we would normally see,” Friesen told *CMAJ*. “We have not been able to link the increase in cases to 1 particular source, or to explain it.”

A laboratory analysis of the *E. coli* showed several different strains and clusters, he says. Some patterns were clustered in families, which Friesen would expect if family members shared a single source of infection, but others do not appear to have any commonality.

As a result, the Region is increasing its surveillance.

“We’re collecting more detailed information on the cases to try to generate some hypotheses about what may be potential sources, and are working with the provincial lab to do further review and analysis of the genetic pattern, to see if there’s some similarity,” Friesen says.

One cluster of cases in early July that involved 4 family members was traced to raw ground beef, Friesen says. Another cluster of 4 cases shared a link to a restaurant. But the Region remains concerned that there may be a broader exposure to a contaminated food product or some other source that it has not yet identified, Friesen says.

So far, there is no indication that the *E. coli* is waterborne, as was the case in Walkerton.

As a whole, southern Alberta has higher rates of sporadic *E. coli* that cannot be explained or linked to a particular source, Friesen says.

“Past efforts to identify particular sources through measures such as case controls or even to examine potential sources that have been suggested in the past, such as feed lots or irrigation canals have not been successful in identifying the source or reason for the

higher number of cases that we have experienced,” he says.

“Clearly, we are challenged by these situations.”

In order to investigate the *E. coli* cases, the Region has suspended its follow-up investigations of other enteric infections, to concentrate staff resources. “We’ve attached a higher priority to it, but it has meant that the follow-up on other resources and illnesses is delayed,” Friesen says. — Laura Eggertson, Ottawa

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News @ a glance

India and China register: The WHO has expanded its clinical trial registry to include trial registers in China and India. This will allow policy-makers and scientist to track local research, improve the quality of research and meet global standards for transparency. The public will also have free access to a more complete picture of clinical research on diseases. The registers will “contribute to improving the ethical conduct of and public trust in clinical trials,” stated WHO Director-General, Dr. Margaret Chan. Both registers will work with their regional medical journals, building on the International Committee of Medical Journal Editors’ requirement that clinical trials be publicly registered before participants are enrolled.

Cannabis v. tobacco: A single joint of cannabis can damage the lungs as much as chain-smoking up to 5 tobacco cigarettes, indicates new research (*Thorax* 2007 July 31; Epub ahead of print). The New Zealand study, involving 339 subjects, also found that cannabis damaged the lung’s ability to get oxygen and remove waste products.

e-Electioneering: Ontario’s Progressive Conservatives are promising electronic health records for every resident within 7 years, if they are elected on Oct. 10. Alberta and Prince Edward Island plan to have their systems in place in 2008; BC will follow in 2009.

Pharmacy of the developing world: India can continue to provide affordable medicines in developing countries after the High Court in Chennai, India, upheld India’s Patents Act against a challenge from the Swiss pharmaceutical giant, Novartis. “This is a huge relief for millions of patients and doctors in developing countries who depend on affordable medicines from India,” stated Dr. Tido von Schoen-Angerer, director of Médecins sans Frontières Campaign for Access to Essential Medicines. Eighty-four percent of the antiretrovirals MSF physicians prescribe worldwide come from India. More than 420 000 people signed a petition asking Novartis to drop its case. Novartis cited World Trade Organization rules in its bid for more extensive patent protection.

Medical ethics award: Dr. John Dossetor (pictured above), *CMAJ*’s former Ombudsman (2002–2006) and a member of the 2006 *CMAJ* Governance Review Panel, was awarded the inaugural Dr. William Marsden Award in Medical Ethics at the CMA Annual Meeting on Aug. 22. Dossetor coordinated the first kidney transplant in Canada and went on to be a trailblazer in the emerging field of medical ethics. He was a founding member of the Canadian Society of Medical Bioethics and co-founded Alberta’s Health Ethics Network (*CMAJ* 2002;166:1327). — Compiled by Barbara Sibbald, *CMAJ*

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