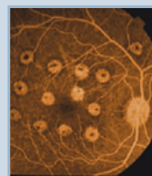


p239 Pocket sized: Laboratories on a chip find a small niche in clinics and research.



p242 Outside edge: Mina Bissell challenges flat thinking about tumor biology.



p243 Genes silenced: Therapies based on RNA interference race into clinical trials.

Tsunami aid spending draws fire over public health

The massive influx of aid into regions hit by the Asian tsunami will miss the opportunity to tackle long-standing, urgent public health crises such as tuberculosis, malaria and HIV, experts say.

Money, medical assistance and personnel flooded into affected areas of India, Sri Lanka, Indonesia and other countries in the wake of the 26 December disaster. These helped rescue survivors and ease initial concerns that infectious disease would boost the death toll.

But within South Asia, experts now fear that governments will devote most of these emergency funds to temporary health services and the establishment of sophisticated natural disaster warning systems—and overlook much-needed improvements in basic health infrastructure that might tackle endemic killer diseases such as tuberculosis and malaria. “This is an opportunity to address the gaps [in public health]. But we are yet to see the government intelligently planning for using the funds,” says Vinya Ariyaratne, executive director of Sarvodaya, a public health organization based in Moratuwa, Sri Lanka.

Prompt relief efforts in camps across the tsunami-hit region curbed early outbreaks of diarrhea, cholera and measles. But fears linger that malaria and dengue could still erupt if stagnant waters turn into breeding grounds for the mosquitoes that carry them.

To prevent such outbreaks, the World Health Organization is strengthening its disease surveillance system and supplying insecticide-impregnated bednets and fogging machines to spray insecticides in the air.

While welcoming these efforts, local experts say that they are only a short-term patch against infectious disease. Authorities would have a far greater impact on public health, they say, if they spent some of the aid money fortifying fragile public health infrastructure. This could be done by creating permanent clean drinking water supplies, improving sanitation and building up clinics, diagnostic equipment and drugs.



Temporary patch: Permanent clean water may be neglected in aid efforts.

“It is up to the national governments to channel some of this aid into strengthening public health mechanisms to address future emergencies and ensuring the services do not vanish once the aid is withdrawn,” says epidemiologist Krishna Kamal Datta, former head of the New Delhi-based National Institute of Communicable Diseases.

Even before the tsunami, public health systems in much of South Asia were in urgent need of repair. Many areas lack sufficient qualified health workers and suffer shortages of basic supplies, such as oral rehydration salts for babies with diarrhea.

Some medical workers fear that the tsunami may also indirectly heighten the risks of HIV in badly hit areas. The destruction of clinics and medical supplies could lead to a shortage of safe blood, condoms and clean injecting syringes.

Those in the region say that the ongoing threat from HIV could be better tackled if long-term reconstruction efforts included prevention and care programs. “The present models of humanitarian response to natural calamities may not help in [fighting] HIV,” says Joe Thomas, a specialist in AIDS prevention at the Northern Territory AIDS and Hepatitis Council, based in Darwin, Australia.

T. V. Padma, New Delhi

Japan moves to combat Asia's escalating infectious diseases

With a new research initiative starting in April 2005, Japan is looking to take the lead in Asia's infectious disease studies.

It is a new approach for a country that has generally escaped the worst of the region's serial disease outbreaks. But with threats like severe acute respiratory syndrome (SARS) and avian influenza knocking on the door, policymakers and researchers have decided to invest in studies that might help thwart these and future epidemics. “There's a renaissance in infectious disease research,” says Toshihiro Horii, a virologist at Osaka University's Research Institute for Microbial Diseases and a driving force behind the initiative.

The scheme from the education ministry has an annual budget of ¥5 billion for at least

five years, and will create research centers at three or four universities to be selected over the next few months. Each program will coordinate the nation's research in one field, such as veterinary sciences, epidemiology or clinical treatment. The diseases to be studied will be selected mainly on their likelihood of invading Japan and are likely to include bovine spongiform encephalopathy (BSE), SARS and avian influenza, say those involved.

The centers will also coordinate research bases outside of Japan, in places such as Thailand, China, Vietnam and Kenya.

Many researchers say such efforts are long overdue. At present, the biggest chunk of Japan's research into infectious diseases takes place at the National Institute of Infectious

Diseases (NIID) in Tokyo. But organizers of the new university-based initiative say Japan needs more sustained, basic research that can anticipate diseases before they happen and escape the bureaucratic obstacles that prevent the NIID from forging connections abroad.

At present, no one country leads infectious disease research in Asia. The Paris-based Institut Pasteur has already established a string of infectious disease institutes in places including South Korea, Vietnam, Hong Kong and Shanghai. It will be important to coordinate across the institutes in order to avoid repetition, says Vincent Deubel, director of the Institut Pasteur of Shanghai. “Competition is good. Overlap is not.”

David Cyranoski, Tokyo