

20/07/2003

Gearing up to tackle future outbreaks

Annie Freeda Cruetz

BACKED by experience mined from the Nipah Virus and Severe Acute Respiratory Syndrome (SARS) outbreaks, the Health Ministry has set up a team to draw up a national outbreak preparedness plan.

The plan would help the ministry tackle any eventuality as a result of outbreaks of infectious diseases, including bio-terrorist attacks.

According to Deputy Director-General of Health Datuk Dr Ismail Merican, the plan envisages the setting up of rapid response teams at district, State and national levels.

Members would be selected and matched according to their expertise and experience, allowing each group to move quickly and effectively.

"Clear lines of authority and communications have to be established in such an event," Dr Ismail said.

"Among other things, the teams must analyse epidemiological information concerning infectious diseases and plan for control and response strategies in the light of overall programme objectives."

These include the training of personnel, identifying resources needed for efficient implementation of a rapid response, outbreak identification, verification, response and management, and communication with the public and the media during an outbreak.

In addition, the teams would assess the investigation and response, identify how best to improve these efforts, and recommend policy changes and improvements.

"A crucial element of the outbreak preparedness plan is surveillance and early detection."

Legally, authorities must be notified when there are incidents of specific infectious diseases. To supplement this, Dr Ismail said, a laboratory-based surveillance and a syndromic surveillance systems have been introduced.

"All these surveillance systems must be integrated. A Surveillance Unit under the Disease Control Division has been established for this purpose."

He added that efforts were being made to make all notifications electronic so that seamless, real-time reporting and updating of data can be achieved.

He said local surveillance must be complemented by international surveillance.

"A system of networking with other international agencies is required to facilitate information-sharing," he added.

Dr Ismail said that an important aspect of surveillance was the ability to detect the disease early.

Healthcare workers must be aware of the characteristics of a bio-terrorist attack, especially as they are often insidious and initially unnoticed.

Classic bio-terrorist weapons such as anthrax, plague and smallpox are infections that are no longer seen in Malaysia. It is crucial, therefore, that healthcare workers be trained to recognise such diseases, especially those in the front line such as casualty and outpatient doctors and general practitioners.

The investigation and management of these outbreaks also require much planning, co-ordination of activities and resource allocation.

Public health practitioners are required to investigate and control these outbreaks, while laboratories have to be prepared to handle the

specimens and make the necessary identifications.

Dr Ismail said some of the agents involved were highly pathogenic and would require special high containment facilities for their processing.

A Biosafety Level 3 facility has been established at the Institute for Medical Research and another has been planned for the National Public Health Laboratory in Sungai Buloh.

Similarly, Dr Ismail said, mortuaries have to be upgraded to enable post-mortems to be undertaken safely and pathologists must be trained to perform these post-mortems.

"Clinical facilities must also be prepared for bio-terrorist attacks. Hospitals need to have adequate decontamination and isolation facilities for patients and appropriate personal protective equipment for healthcare workers.

"Infectious control measures have to be put in place and all healthcare workers have to be appropriately trained."

Sufficient supplies of critical items like essential antibiotics, vaccines, disinfectants and personal protective equipment must be stockpiled and distributed in a timely and efficient manner in times of crisis.

In this regard, the ministry will be setting up an Institute of Natural Products Research and Vaccinology with the assistance of the Ministry of Science, Technology and Environment as part of the BioValley initiative.

Dr Ismail said appropriate attention would also be paid to communications as such incidents were bound to generate much fear, anxiety and panic among the public.

The ministry, he said, would work closely with other government agencies and non-governmental organisations during crises.

Handling SARS, Dr Ismail said, proved successful even though it was a new infectious disease caused by a novel virus.

"This is, to a great extent, due to the prompt and proactive measures taken by the ministry and the close co-operation we have with various ministries and agencies in the National Committee for SARS Control, and, of course, members of the media and the public."

"We realise that dissemination of reliable, accurate and timely information to everyone is crucial.

"We had major problems in the beginning, mainly because of rumour-mongering and uncertainties in the handling and management of cases and contacts.

"But we managed to overcome them by providing up-to-date information through daily Press briefings, guidelines, advisories, pamphlets, presentations to various groups, talk shows, forums, a dedicated website and close collaboration with the World Health Organisation."

The recent SARS outbreak demonstrated how an extraordinarily well-coordinated effort can address the threat of emerging infectious diseases in the 21st century.

The global virtual communication of scientists, clinicians and researchers helped to provide up-to-the-minute information for clinicians, healthcare workers and public health officials.

The network of laboratories took advantage of modern communication technologies to enable the outcome of investigations on clinical samples of SARS patients to be shared in real time, and this was really tremendous and has helped in the identification of a novel coronavirus as the probable causative agent of the new disease.

Dr Ismail said the laws pertaining to the prevention and control of infectious diseases in Malaysia would be reviewed and appropriate amendments would be made where necessary.

"A blueprint on how to handle emerging infection will be prepared based

on the experience gained from the SARS outbreak."

He said that a lot of thought and planning was required to achieve the necessary level of preparedness.

"Training of personnel is crucial and there is a need to draw up such a training programme as soon as possible. Similarly, the infrastructure in the public health sector, hospitals and laboratories have to be upgraded."

Prime Minister Datuk Seri Dr Mahathir Mohamad recently announced the setting up of the Centre for Disease Control at IMR and the setting up of the Institute of Natural Products Research and Vaccinology in the Economic Stimulus package.

The CDC at IMR will be modelled after the communicable disease centre at the Centers for Disease Control in Atlanta, US. It would serve primarily as a research and training centre on all aspects of infectious diseases in Malaysia and the region, said Dr Ismail.

Among its activities will be to strengthen systems and mechanisms as well as create opportunities for research in all aspects of infectious diseases, provide expertise, collaborate closely, conduct training, improve health education, strengthen nosocomial infections and antibiotic usage control activities and create linkages with similar regional centres.

The activities of the Institute of Natural Products Research and Vaccinology would include ensuring an adequate supply of basic childhood vaccines and catering for research and development for newer vaccines required in the Asean region (such as Nipah Virus, Japanese encephalitis, enterovirus and dengue vaccines).

It would also train and develop experts on vaccine research and development, and seek smart partnerships on bio-technology.