An interview with Professor Lucille Blumberg

Professor Lucille Blumberg is the Deputy Director of the National Institute for Communicable Disease (NICD), National Health Laboratory Service (NHLS). She also holds the position of Head of Public Health Surveillance and Response Division which was established in 2004. The Division is responsible for the surveillance of disease outbreaks, travel medicine, and surveillance for selective diseases of public health importance.

Professor Blumberg is the medical consultant to the Centre for Emerging and Zoonotic Infections, including rabies and viral haemorrhagic fevers. She is a lecturer in the department of Clinical Microbiology and Infectious Diseases at the University of the Witwatersrand. She is also an Associate Professor Extraordinaire in the Department of Medical Microbiology at the University of Stellenbosch, and an honorary Associate Professor in the Department of Pharmacology at the University of the North-West. She is a registered specialist in medical microbiology and infectious diseases, and a fellow in travel medicine through the Royal College of Physicians, Glasgow. She has a diploma in Occupational Health. Her teaching and academic activities are widespread and include lecturing and examining students in Clinical Microbiology and Infectious Diseases, as well and in Tropical Medicine and Hygiene. She is also a lecturer and examiner for the travel medicine certificate course at Wits.

With such a background in medical microbiology and tropical medicine, Professor Blumberg is well placed to comment on the 2014 outbreak of Ebola in West Africa, and the potential for spread of this infectious disease to other continents. Professor Blumberg recently gave a talk on this subject at the 17th Congress of the MMPA.

Q: Medical professionals and other people with an interest in the disease are familiar with the history of the first outbreak of Ebola in 1976 in the Sudan, and subsequent infections throughout the years. What makes this current outbreak in the three neighbouring West African countries of Guinea, Liberia and Sierra Leone, with almost 5000 recorded deaths, different?

A: These countries lie in an area that had not previously experienced such an outbreak of Ebola. The population, for the most part, is highly mobile, as people have to travel long distances to market and for funerals and burials. There was no previous experience in dealing with the virus, which was one of the reasons it was identified so late – (four months after the first infection. By that time it had spread to multiple areas.

Exacerbating the situation is the poor infrastructure in these countries, which includes the destruction of health services and hospitals during the punitive civil wars. Once the virus was identified, poor messaging and politically manipulated misinformation made the situation even worse. People became reluctant to go to treatment centres and they clung to their traditional burial practices. Health authorities were not able to apply key interventions and it was difficult to track down infections in the bigger towns and cities.

Q. What have outside health agencies and governments done right in the face of this worst outbreak ever? What have they done wrong? What could they have done differently?

A. Nigeria has done well to contain its outbreak rapidly and efficiently even within the challenges of a crowded city. The outbreak followed the introduction of the virus by an ill Liberian traveller who infected exposed health personnel who cared for him on arrival.

While Médecins Sans Frontier responded very rapidly and intensively to the growing outbreak, and provided

essential treatment and raised the alarm many months ago, the international community and international agencies did not respond adequately or early enough, and the outbreak has run several steps ahead of any interventions. There has been a lack of a co-ordinated response between agencies. The collection of reliable data on cases, contacts and deaths has been a persistent problem, with no central source of information. 'You cannot manage what you cannot measure'. On top of this, there was under-reporting as many people went into hiding, fearing they wouldn't come out alive if they were taken into treatment centres.

Q. As a Fellow of the Faculty of Travel Medicine what, in your opinion, constitutes the gravest threat to communities living outside of the worst affected areas at the centre of this disease?

A. Porous borders and a mobile population. The recent example of the child is a case in point. The child was fetched by relatives after the mother died from Ebola virus disease and, despite being ill, was taken into Mali, involving a long journey. She was very ill on the journey, vomiting and exposing other travellers to a risk of infection. The other example is the Liberian man, a known contact of an Ebola patient who exited Liberia despite being ill, and flew to Lagos resulting in the Nigerian outbreak after exposing and infecting health workers who attended to him after he collapsed soon after arrival.

Q. What special precautions should mine owners be taking with regard to their migrant labour force?

A. Ebola is not a major threat to the South African mine labour force given the very limited number of migrant workers from the affected countries in West Africa. On the other hand, there are a large number of ex-pats working in West Africa who need to be correctly informed about the risks. While their risk of an Ebola infection is close to zero, as they would not be exposed to Ebola given that they are not likely to handle blood, vomitus or faeces of infected persons, they need to protect against other diseases such as malaria as symptoms can mimic Ebola. The element of panic is very real if a person working in the affected countries develops fever and people believe he has Ebola. It's very important to get the right care for a fever or illness and not just assume it's Ebola. Companies that operate in Africa need to take malaria much more seriously and ensure that there are appropriate malaria prevention programmes in place and compliance is enforced. Ebola is not a reason to disinvest!

Q. What side-effects has this outbreak had on the affected countries, apart from the obvious loss of life?

A. What no-one has factored in until now is the huge knock-on effect that this outbreak has had on vital services and food security. Fragile healthcare systems have been even further disrupted with clinics closing down because of healthcare workers' deaths. This means that other illnesses are also not being treated. There is a humanitarian, health and financial disaster unfolding day by day.

Q. What has the rest of the world learnt from this current outbreak?

A. The need for stronger disease monitoring and response systems for one, and that disease, even in remote parts of the world can affect the global community. Treatment for neglected diseases needs to be taken seriously!

Q. How far away is the medical research community from a vaccine?

A. Close. Research that has been quietly going on in the background for decades has reached the human phase of testing. The next issue will be how to get the vaccine into the field.

Q. Is South Africa prepared to contain any infected patients – will they be identified in time? Can you comment on the response of the South African government to the epidemic?

A. We have seen an active response from the government. South Africa has been dealing with related viruses such as Congo Fever on an ongoing basis for a long time, so we have the experience and a number of systems in place. Key to an effective Ebola response is for health workers to recognise any potential cases early, and rapidly contain any spread. Recording accurate travel histories, likely exposures and compatible symptoms in persons travelling from an Ebola affected area in the previous 21 days is critical.

Q. Currently there is a debate about isolating volunteers returning from Ebola-hit countries for 21 days, in the USA. What is your comment on this?

A. Health workers who are not showing symptoms do not pose a risk. However, they do need to be closely monitored – they need rest, and they need active support. Other travellers from infected areas, who develop a temperature, need to answer the question 'have you been in contact with or touched the body fluids of anyone who is sick?' If not, then assume any fever is either malaria or something else, and test and treat it accordingly.

Q. Can you comment on the interactions of Ebola and other infectious diseases, such as malaria?

A. A patient's general health status will dictate how well he or she copes with an Ebola infection. Treatment is about hydration, baseline nutrition, and treating other infections. If these treatments are applied, they will help the patient cope.

In conclusion, Professor Blumberg stated that affected populations are beginning to see that their best hope for survival is to enter a treatment centre, and not to hide infection. However, the problem now facing healthcare workers is the lack of beds.

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