

## **A conversation with Professor Nigel Lightfoot on April 1, 2014**

### **Participants**

- Professor Nigel Lightfoot CBE – Executive Director of CORDS; Senior Consulting Fellow, Centre on Global Health Security at Chatham House; former Director of Emergency Response and Senior Advisor, UK Health Protection Agency
- Alexander Berger – Senior Research Analyst, GiveWell

**Note:** This set of notes was compiled by GiveWell and gives an overview of the major points made by Professor Lightfoot.

### **Summary**

GiveWell spoke with Professor Lightfoot as part of its investigation of biosecurity issues. Conversation topics included the work of CORDS, the importance of an all-hazards approach to pandemic preparedness, and regulation of dual use research.

### **Connecting Organizations for Regional Disease Surveillance (CORDS)**

Connecting Organizations for Regional Disease Surveillance (CORDS) is an international non-governmental organization that connects regional disease surveillance networks in different parts of the world. The six founding CORDS members include two networks in Southeast Asia, one in southern Africa, one in East Africa, one in the Middle East, and one in southeast Europe, covering a total of 28 countries.

The goal of CORDS is to detect future emerging pandemic threats faster by building capacity and exchanging practices between their member networks. Building capacity generally means getting member networks to work together on innovative projects, and helping transfer experience between them.

CORDS launched as an independent organization in 2013 with an initial budget of \$3.5 million over 2 years supported by the Skoll Global Threats Fund, the Gates Foundation, and the Rockefeller Foundation. Most of their work is on the ground with the networks, so the headquarters staff is only 3 people.

#### *Regional disease surveillance networks*

The basic case for regional disease surveillance networks is that microorganisms do not recognize international borders. Countries that share borders often have a will to work together and often face similar issues, but participation in the networks is fully voluntary.

Collaboration takes different forms in different networks:

- Palestine, Jordan, and Israel have a shared disease surveillance database for the diseases they are interested in.

- The Mekong Delta network has a protocol in which information on some diseases is shared daily, while information on other diseases is shared on a weekly basis. They have agreed to share that information, and they also meet regularly to discuss.

The formation of networks has been fairly contingent, based on history and funding availability. CORDS is attending a meeting with India, Pakistan, Bangladesh, Nepal, and possibly Sri Lanka about forming a network in those countries. This is funded by Skoll Global threats Fund through Promed.

Forming networks typically takes a relatively limited amount of funding for initial recruiting purposes and then to support a coordinator in the central offices in charge of disease surveillance in participating countries.

### *CORDS projects*

CORDS is conducting three innovative operational research projects:

1. Using mobile phone technologies for disease surveillance of both animals and humans in southern and east Africa. About 1000 community health and community veterinary workers are reporting data using cell phones.
2. Studying cutaneous Leishmaniasis in the Middle East and visceral Leishmaniasis in southeastern Europe to determine why the disease is a health issue in some countries but not others and to study the vector and reservoir patterns to develop a risk index.
3. Using disease surveillance infrastructure in East Africa to map maternal and child morbidity and mortality.

The Gates Foundation has provided initial funding to get these projects going, and then CORDS hopes to raise funds from more traditional academic sources.

CORDS also has a project, called One Health, aimed at bringing the veterinary and public health communities together to work on zoonotic diseases more effectively.

CORDS also works with Interpol to put on biosecurity workshops around the world, including recent workshops in Jordan and Vietnam. They are bringing health, public health, law enforcement, and security personnel together, often for the first time, to work out mechanisms for collaborating in the future. The Canadian and United States governments currently fund these efforts.

### **The importance of an all-hazards approach to preparedness**

Because pandemic threats are so unpredictable, it is very important to take an all-hazards approach to pandemic preparedness. We do not have adequate information to limit the range of possible threats sufficiently to justify a narrower focus.

For instance, many flu experts believe that avian flu caused the 1918 flu pandemic, and they thought that it would cause the next global pandemic. That led them to focus on avian flu and Southeast Asia, where many avian flu strains have emerged globally, and as a result

the global community overlooked the emergence of swine flu in Mexico in 2009 for 6 weeks.

In the future, bats, which are coming into more contact with humans due to environmental changes, appear to be a particularly dangerous source of potential zoonotic diseases.

### **Dual use research and biosecurity**

Professor Lightfoot is also a senior consulting fellow at the Centre on Global Health Security at Chatham House, where he works on a project on approaches to securing potentially dangerous biological materials in developing countries. Because of resource limitations, rules from developed countries aren't necessarily applicable in developing country, so Professor Lightfoot believes that risk-based approaches are required.

He recently chaired a panel on dual use research at Chatham House, where there seemed to be a consensus in favor of stronger regulation. However, despite the many conversations that have taken place around the topic of dual use research, action has been lacking. Professor Lightfoot and others at Chatham House are hoping to do some work to ascertain what needs to be done to change policy.

### **Other people to talk to about these issues**

- Ambassador Bonnie Jenkins — Coordinator for Threat Reduction Programs for the US State Department

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