

# THIS WEEK

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## First response, revisited

*The Ebola outbreak in West Africa has starkly exposed major gaps in plans to tackle emerging infectious diseases. Lessons must be learned.*

It is encouraging that the United States last week committed 3,000 military personnel and US\$750 million to lend logistical support to civilian efforts to tackle the Ebola outbreak in West Africa. Civilian efforts also received a major, if belated, boost from United Nations intervention, with a Security Council resolution (see page 469).

Six months into the outbreak, this massive deployment of the US military and the combined resources of the UN is a damning indictment of the World Health Organization (WHO), the UN's health arm charged with tackling outbreaks of potential international concern.

The international community has debated pandemic planning and outbreak response intensely over the past decade, following the SARS (severe acute respiratory syndrome) epidemic and the increased awareness of the threat of avian flu.

In 2005, the WHO member states agreed the International Health Regulations (IHR), designed to help the international community to respond better to outbreaks. And last year, the WHO adopted an Emergency Response Framework to guide its own actions.

These frameworks have failed miserably in this outbreak, and the WHO has been slow and, so far, ineffective. There has been some progress in disease surveillance, but the world is little better prepared to quickly stamp out a threatening outbreak than it was a decade ago.

Earlier this month, WHO director-general Margaret Chan told *The New York Times*: "We are not the first responder... the government has first priority to take care of their people and provide health care. WHO is a technical agency." Fair enough, but if the WHO is not the first responder to an emergency such as this, then who is? The Ebola outbreak clearly demonstrates that response to such events cannot be left to the non-governmental organizations (NGOs) and governments of some of the poorest countries in the world.

The IHR states that countries must boost their surveillance and outbreak-response capacities, and that individual governments must foot the bill. The aspirations are correct: strengthening health-care systems everywhere will be the best defence against outbreaks of potential international concern. But the reality is that few poor countries have anything that resembles a working outbreak-response system.

Rich countries must make a greater effort to help poor countries to boost their health-care systems to defend against outbreaks, which would also contribute to the UN's Millennium Development Goals of achieving reductions in child and maternal mortality and other causes of morbidity and mortality. The case is strong for a new global health fund to help build functioning health systems, on the scale of the multibillion-dollar Global Fund to Fight AIDS, Tuberculosis and Malaria.

But building better health-care systems will take time. One immediate step should be to create an international contingency fund. A 2011 independent review of the IHR called for the creation of a pot of at least \$100 million that the WHO could immediately tap in the event of a public-health emergency. But that sensible proposal has been taken nowhere by the WHO's member states. It should be resuscitated, and its

size realistically estimated — \$100 million is probably on the low side.

Also lacking is the capacity to quickly deploy medical supplies, emergency field hospitals, and people trained in the many aspects of outbreak response — from surveillance, epidemiology and virology to implementing public-health control measures, patient care and biosafety.

Rapid emergency response to outbreaks must inevitably be done on a case-by-case basis, drawing on the resources of individual country donors, the UN and NGOs. Flexible international plans and agreements should be put in place to allow this. A large reserve corps of appropriately trained staff should also be established. Lack of personnel has been the biggest bottleneck in the Ebola response.

In principle, the WHO should be the body best placed to oversee international response to outbreaks. It has a total budget of \$4 billion for 2014 and 2015, less than many large Western hospitals, but it also spreads itself too thin by trying to do too much. The organization's budget for outbreak response is just \$110 million a year, and funding for preparedness and surveillance is just \$140 million. Moreover, funds have dwindled and the organization has lost vital in-house expertise and talent for responding to outbreaks.

If member states want the WHO to be more active in outbreak response, they must fund it adequately. But the slow and bureaucratic WHO must also demonstrate that it is up to the task, and can spend its money wisely and act fast. ■

**"Strengthening health-care systems everywhere will be the best defence against outbreaks."**

## Staff support

*German research organizations need to help their workers to defend animal research.*

Last year, an animal activist code-named Pawel got a job as an animal carer at one of Germany's leading neuroscience laboratories. Pawel stayed at the Max Planck Institute for Biological Cybernetics in Tübingen for more than six months, secretly filming the monkeys that are used there to study how the brain works.

On 10 September, a seven-minute film purporting to show immense cruelty and suffering was aired on German television. The scenes of animals bleeding from surgery and apparently being manhandled into restraining chairs were hard to watch.

The impact on the institute was immediate. Staff members were threatened, and politicians were called on to shut down the research.

With increasing frequency, animal activists are infiltrating labs where

research is done with non-human primates. Four such operations have been conducted in the past 18 months alone by the media-savvy British Union for the Abolition of Vivisection in London, which has also produced an English-language film clipped from Pawel's footage.

The Max Planck Society (MPS) — the Tübingen institute's umbrella organization — was taken off guard by the furore, but it has responded well. It immediately set up an independent expert investigation into conditions for animals in the institute, and published its initial conclusions on 18 September. It said that the film gave a false impression and that the monkeys are particularly well treated at the institute — although veterinary staff are working at the limits of their capacity. The MPS declared that no new research projects will be initiated there until another vet is hired, and until a computer system to record the animals' consumption of food and drink is in place. And rather than insisting that scientists keep their heads down, as it has in the past, it sent the institute's animal-welfare officers to a television debate on 17 September.

More concerning is the fact that the MPS was taken off guard at all. The society has delayed moves by the German scientific community to create an organization to lobby appropriately for animal research and provide professional support in crises such as this one. The moves had in any case been much too slow, given Germany's ambition to become a biomedical powerhouse, which activist campaigns are undermining.

*Nature* has long advocated for professional animal-research lobbies to combat such campaigns with openness. To battle diseases from Ebola to Alzheimer's — which most of society wants to see conquered — researchers need to use monkeys. It is a difficult issue, and it is understandable that some people think research using non-human primates is too high a price for human health. Some animal activists distort the true facts of such work, or threaten scientists, to promote their cause. Researchers who use monkeys realize that keeping quiet about their work is ineffective. They believe that a more effective — and honest — strategy requires them to show the world what they do, and explain why.

The United Kingdom, France and the Netherlands all have national organizations that support and advocate on behalf of animal research.

The powerful US Society for Neuroscience (SfN) and its European counterpart, the Federation of European Neuroscience Societies, have specialist committees. "We all know we need to come out of the closet," says Mickey Goldberg, a neuroscientist at Columbia University in New York, who is chair of the SfN committee of animal research and has spoken in support of the Tübingen scientists.

The Max Planck Institute in Tübingen has, independently of the nervous MPS leadership, done a good job of explaining on its website why it uses monkeys, and how they are cared for. Yet coverage of the recent incident suggests that journalists did not turn to it for information. They might have used an authoritative and independent professional organization — had it existed. Such a group could also have given media training to those who might be targeted by animal activists, or might need to speak up, including research leaders. The representatives who took part in the television debate did a splendid job of defending the Tübingen institute's work, but they did not seize the initiative to match the activists' skills in appealing to the emotions of their audience by explaining that animal research is needed to save lives and alleviate suffering. That is what media training can teach you.

German scientists have led the European discussion on openness about animal research, but they have not been served well by their organizations, which have stalled for time, worried and quarrelled among themselves. The Tübingen debacle must be a wake-up call for them. There are encouraging signs. Last week, the chastened Alliance of Science Organisations in Germany — whose members include the MPS as well as universities and granting agencies — agreed to present plans for an independent organization in the "foreseeable future". It should do this fast. Animal-activist groups in Europe are becoming ever more professional, well organized, coordinated and well funded. The research community needs to match them. ■

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## Special interest

*As the Scottish referendum showed, scientists' views can influence political debate.*

It is natural for local and specialist media to seek a relevant position on national and international events. Taken too far, such an approach breeds satire — see the 'local man lost at sea' line, a possibly apocryphal headline from a regional newspaper's report on the sinking of the *Titanic*. But it can sometimes help to drill into general-interest topics; what is the wider world if not an ever-shifting collection of individual groups of special interests?

To some outside the British Isles (and some inside), last week's decision by the people of Scotland to remain with the United Kingdom merely saw the status quo continue. No iceberg, no shipwreck. Yet there are lessons for scientists; they just have to see them.

As is normal in independence debates, the political fight over Scotland's future was rancorous. And when the result — 55% no to independence, 45% yes — came in early on Friday morning, many scientists were among those either elated or mourning a lost opportunity.

It would be going too far to say that debates about how science would fare in an independent nation became central to the decision. But the prospects for research did provide an intriguing and relevant subplot.

Pressure groups on both sides — Academics for Yes and rivals Academics Together — received significant airtime. Heavyweights from UK learned societies were wheeled out to make the case for the union in that most British of political statements: a letter to *The Times*

newspaper. Scientific leaders were presented front and centre as part of the dialogue, and both research and academic freedom in Scottish universities were held by both sides as a prize to value and fight for. In the days leading up to the vote, Alex Salmond, leader of the Scottish government and the independence movement, was attacked over claims that he bullied the head of the University of St Andrews, Louise Richardson, because of her unfavourable (to him) views.

The media, and through them the UK public, were interested in more than just researchers' political opinions and analysis of their funding streams: scientists' daily work was also enlisted. Estimates of the size of the oil reserves in an independent Scotland became front-page news and even the subject of conspiracy theories, with allegations that the unionist UK government was concealing the true, vast scale of Scotland's potential future wealth.

The story has some way yet to run. Scotland will get extra powers to tax and spend — a sop promised to separatists in the desperate campaigning (see *Nature* <http://doi.org/vvm>; 2014). These may even end up resulting in more money for science. But the message from the politicians and the public is already clear: science is important and the views of scientists occupy a privileged place in debates. This may not surprise anyone but it is worth saying, especially at a time when researchers from Australia to Canada feel under-served by their political masters.

Lobbying for science is too important to be left to the science lobby alone, as effective as it can be. Every scientist can do more to talk up the importance of what they do. Researchers who care nothing for

Scotland and have no comprehension of the differences between the United Kingdom, Great Britain, England, Scotland, Wales and Northern Ireland should still care about this message. Your voices carry great weight: use them. ■

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