

THIS WEEK



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Contaminated food for thought

If it is to deal effectively with outbreaks of infectious diseases, Germany must streamline its convoluted systems for reporting and communication.

Some six weeks after the first cases of potential food poisoning were reported, diners in Germany are still contemplating their side salads nervously, spooked by the confused information and warnings that have been issued over the past few weeks. Which item of greenery might be home to the deadly *Escherichia coli* bacterium known as EHEC O104:H4? By 13 June, the microbe had infected 3,325 people and killed 36.

The German public has been traumatized. It took weeks for the probable source of the bacterium to be named as an organic-beansprout farm in Lower Saxony. And, inevitably, accusations of crisis mismanagement are starting to fly.

These critical fingers, rightly, are not pointed at the scientists in Germany (and elsewhere), who rose admirably to the challenge of identifying and analysing the culprit. Instead, they are directed, with some justification, at the bizarrely complicated system Germany uses to handle disease outbreaks and track their sources — and at an alarmingly outdated way of transmitting information between physicians and agencies.

Ultimately responsible for disease control and prevention is the Robert Koch Institute in Berlin. However, Germany's federalized structure means that the institute receives its information indirectly, through many tiers of hierarchy.

The clinical laboratories that investigate samples sent to them by physicians and hospitals must promptly report notifiable diseases to their district health office, of which Germany has more than 400. Each of these offices passes the information on to its respective state ministry, which then transfers it to the federal health ministry, which then passes it onto its Robert Koch Institute. Days can elapse at transfer points and, scarcely credible in 2011, some of this information is still sent by post.

There is more. Responsibility to track the source of food-borne infections lies not with the Robert Koch Institute, but with the Federal Institute for Risk Assessment, part of the Ministry of Food, Agriculture and Consumer Protection. So, together there are two federal ministries, two federal technical institutes and 16 state ministries that can each pronounce on progress. Inevitably, confusion emerges — as demonstrated by the rushed and false fingering of Spanish cucumbers as the source late last month by Hamburg's state health minister, Cornelia Prüfer-Storcks.

Two things need to be done. First, Germany must eliminate the information-transfer chain and introduce a centralized electronic database that district health offices feed information into directly. Ideally, this would be supplemented by mandatory electronic reporting of individual cases by physicians. The US Centers for Disease Control and Prevention in Atlanta, Georgia, operates such a system, and the idea was discussed in Germany after the 2009 swine-flu pandemic. However, the proposal lost political support because it threatens the autonomy of the states.

This takes some explaining. Germany's post-war constitution was

designed to keep centralization to a minimum, and many responsibilities, including health, were devolved to the states. Introduced to prevent another dictator like Hitler, this principle is hard to attack. But it was never intended to hinder Germany from controlling politically illiterate microbes with no respect for state borders. Clearly, a way must be found to make an exception to the devolved-responsibility rule, at least when it comes to infectious diseases.

“A way must be found to make an exception to the devolved-responsibility rule.”

The Robert Koch Institute, which has proven itself extremely competent in handling its part of the *E. coli* crisis given the blocks put in its way, needs much more power. Second, when disease threatens, Germany needs to be able to speak to its people with one voice — no matter how many authorities are involved in the process. This should be the Robert Koch Institute.

EHEC O104:H4 has proven to be a particularly evil enemy. Current agricultural practices are likely to generate other microbes of equal virulence or worse, and these will inevitably spread as people travel. Authorities in Germany and elsewhere must be able to keep control. ■

Full transparency

Nations should release global nuclear-monitoring data to academics and the public.

Under the auspices of a proposed international ban on all nuclear-weapons tests, scientists have built a system that can detect an illicit explosion anywhere in the world. The monitoring network stretches from Antarctica to Siberia and captures a wealth of useful data — not just on infrequent atomic bangs, but also on other types of explosion, earthquakes, underwater shocks and radiation releases.

Yet access to these data is restricted to contributing governments and selected allied scientists, who are largely prevented from sharing the information with the public. The diplomatic excuses offered for this unwise and unnecessary secrecy no longer wash, particularly in light of the March meltdowns at the Fukushima Daiichi nuclear power plant. At a meeting in Vienna next week, scientists who used these data to inform their governments about the scale and dangers of the Fukushima accident, but who saw the results kept under wraps, will push for change.

Their move deserves support. Data from the network, run by the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), should be freely available to scientists everywhere, for study in their own right and to inform the public in times of crisis. Governments