

The End of Epidemics: It's all about the money

[By Debora MacKenzie, published in *New Scientist*, print edition of April 7, 2018](#)

Reviewing: [The End of Epidemics: The looming threat to humanity and how to stop it](#), by Jonathan D. Quick with Bronwyn Fryer

A new book's ambitious plan to spot and stop global epidemics is easier said than done unless governments show willing and fund a real scheme to do just that

INFECTIOUS disease is humanity's oldest and deadliest [enemy](#). Epidemics from HIV to flu remind us that it is far from defeated. As the human population grows, factory farming expands and climate change upends the ecology of infections and their hosts, new pathogens are invading – and every time one does, it is clear that we aren't prepared. Public health experts seethe with the knowledge that this just isn't [good enough](#).

So Jonathan Quick, a veteran of the World Health Organization and of efforts to get good business practice into [public health](#), has written a book about how best we can face this threat. After all, outbreaks of new and nasty pathogens won't stop happening as they are part of human ecology.

In *The End of Epidemics*, Quick and co-author Bronwyn Fryer spell out the seven biggest things we need to stop those outbreaks becoming epidemics. It is an impressive wish list. Top of the pile is urgent, aggressive leadership on public health. Then there is the development of strong national health systems to spot and pounce on new diseases. Global programmes for disease prevention is next, from promoting handwashing to killing mosquitoes. Good communications between authorities and people at risk is vital too, as is better research and development on diagnostics, treatments and vaccines. There is also a need for popular advocacy to push governments to invest more in epidemic preparedness. Finally, of course, we need an awful lot more money and investment.

“The WHO has launched a field investigation of a disease outbreak at a rate of nearly one per day”

Few disease experts would disagree that we need all of the above. Quick gives success stories from when some elements of the wish list were present: the leadership that banished smallpox and SARS, the R&D that led to an effective Ebola vaccine, the advocacy that led to HIV treatment. And he recounts how badly things can go when they weren't, most notably the disastrous failures in communication during West Africa's 2014 Ebola epidemic.

But how do we ensure that Quick's list – or most of it – is in place? In a 1972 parody of a children's television show, the classic [British comedy Monty Python](#) advised that “to rid the world of all known diseases”, one merely had to “discover a marvellous cure” then “jolly well tell them what to do and make sure they get everything right so there will never be any diseases ever again”.

“SARS was contained after it had killed 774 people, but it cost the world some \$40 billion”

Quick’s seven priorities can seem a bit like that: telling us where we need to go while not quite telling us how to get there. For example, he calculates that if the poor countries that harbour many worrying pathogens were able to collect even 20 per cent of their GDP as taxes – instead of losing so much of it to tax havens – and then spent 15 per cent of that on healthcare, they would have healthy citizens, and could spot and stop the next pandemic to boot.

Yes, that would be good. But he offers few clues to how we make it happen. It has eluded Greece, never mind Guinea. Imagine the impossible, then make it happen, Quick urges. It is true we have to imagine what we want before doing anything. But we cannot just imagine how to approach that tricky, second bit.

If anyone does know, it should be Peter Salama, who heads the [WHO’s Health Emergencies Programme](#). “For the first 18 months that we’ve existed, we’ve been trying to answer exactly that question,” he told me recently.

The WHO underwent a major restructuring to put the emergencies programme in place, after being widely criticised for its slow response to [Ebola in West Africa](#). Six of Quick’s seven suggestions are now on Salama’s plate. But spending is still within the control of individual governments.

Quick doubts the WHO’s traditional command and control approach could achieve global health security. But while his book was in press, a lot has changed; the emerging culture of the emergencies programme is more about coordination instead.

Certainly, the 300 people at its headquarters in Geneva, Switzerland, can’t be a global fire department for disease on their own. But as a UN agency, the WHO’s global mandate means it can pull hundreds of outside experts and institutions together as and when they are needed, says Salama. After reaching fighting strength some six months ago, the programme has launched a field investigation of a worrying disease outbreak somewhere in the world at a rate of nearly one per day.

For the first time, Salama says, one agency is systematically trying to keep tabs on all the potentially severe health risks arising across the world, in real time, using input ranging from press reports to government requests for help. That has led to earlier responses to outbreaks and, he says, “a real sense of urgency”.

The programme is also helping poor countries monitor their population’s health and boost disease prevention. It is running an ambitious [R&D “roadmap”](#) and incorporating R&D and risk communication into outbreak response. “For the first time, the WHO can articulate the health needs of the world,” says Salama.

That at least starts to address six of Quick’s seven targets. But as always in public health, the seventh is the rub: money.

After the slow international response to Ebola, the WHO’s member nations approved of its shift to emergency surveillance and response. In its first 18 months, the emergencies programme

received more than 90 per cent of the \$1 billion or so it needed. But it was all earmarked by the donating countries for specific projects, and was all very short term.

In January, the WHO started a new two-year financial cycle – and the emergencies programme will now have to start from scratch to find its funding again. Salama is optimistic that he will have his budget again within two years. In the meantime, he is running on a tiny pot of emergency funds. If there is a big outbreak tomorrow, “the picture isn’t pretty”, he says.

To be safe from nasty new diseases, we have to spot them and slam the lid down when they first emerge, not chase them after they spread. We need money upfront to do that. “To do what we need to be safe, we need to be proactive, not reactive,” says Salama.

Quick is “furious” we aren’t already doing that, not only because of the suffering and social collapse [that could follow a pandemic](#), but also because prevention really is so much cheaper than cure.

He reckons that global spending of \$7.5 billion per year for the next decade – around a dollar for each person on the planet each year – would do the trick. This would be enough to fund the WHO and its far-flung collaborators, from new public health agencies in the poorest countries to cutting-edge vaccine research in rich countries.

Looking back to the SARS [virus](#), the point couldn’t be clearer. The virus emerged unexpectedly and reached 37 countries in 2003. It was contained after it had killed 774 people, but that extraordinary effort cost the world economy some [\\$40 billion](#).

Quick calls investment to spot and stop such surprises, instead of dealing with them once they cause havoc, a no-brainer. Yet in another kind of no-brainer, the world’s richest nation, the US, is threatening to withhold funding from the WHO, and even from its own Centers for Disease Control, a key global player.

We know where we need to go. Salama and his team are trying to find the way. The pathogens are out there. We could certainly use some of the advocacy for public health spending Quick calls for – and soon.