



‘Total treatment failure’: Terrifying ‘superbug’ crisis will kill millions and devastate world economy

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The world is just years away from a devastating crisis that will claim millions of lives and decimate the global economy, with experts warning we need to “act now”.

The medical industry has been sounding the alarm over antibiotic-resistant “superbugs” for years now, but estimates now show the threat posed by the looming crisis could be far more serious than many of us probably realised.

It is now expected that the rise of antimicrobial resistance (AMR) could kill 10 million people every single year by 2050, and cost the world economy a staggering US\$100 trillion (NZ\$162.2tr).

A ground breaking new report from the Australian Academy of Technological Sciences and Engineering (ATSE) and CSIRO has revealed that in just 27 years’ time, everyday infections will become life-threatening and some surgeries too risky to perform.

Life expectancy is also expected to plummet as a result of superbugs – unless something is done to combat the growing “silent pandemic”.

The problem of bacteria and other nasties becoming immune to the very drugs that have been developed to stop them in their tracks has largely been caused by the misuse or overuse of medicines, such as antibiotics.

It’s so serious that the World Health Organisation recently named AMR as one of the top 10 public health threats facing humanity.

During a webinar ahead of the release of the report ***Curbing antimicrobial resistance: A technology-powered, human-driven approach to combating the “silent***

pandemic”, the CSIRO’s lead of the Minimising Antimicrobial Resistance Mission, Dr Branwen Morgan, said there was a “social imperative to act now” as a matter of “urgency” before we reach a point of “total treatment failure”.

And she said without immediate action, nobody would be able to escape what was to come, whether it be children with simple ear infections or women struck down by common urinary tract infections.

“We are seeing increased failure of the antibiotics we have. Half of all women will get a UTI, and we already know the first-line drugs they are being given first off aren’t working,” she said.

Dr Morgan also pointed to a recent example of a US government worker who nearly had their finger amputated after a scratch from a rose thorn turned incredibly serious when drugs failed to treat the minor injury.

“This is a really, really serious problem and it’s going to affect us all – nobody is immune,” she warned.

“And people with chronic health issues who are immunocompromised, and people who have had cancer treatment, will be even more compromised.

“Some people who need surgery now get a big dose of antibiotics beforehand ... to avoid infections, but everyday surgeries will become too risky and people won’t want to do them, so modern medicine is absolutely at risk.”

Sue MacLeman, a fellow of the Australian Academy of Technological Sciences and Engineering (ATSE), said if the situation sounds “very alarming”, that’s because it is.

“We have lots of very good antibiotics and antimicrobials that don’t have resistance to them yet, but we know the problem will be catastrophic to humans and animals,” she said.

“It’s important to think about what we can do about it to be proactive and prepare.

“We know we have a problem – we need solutions.”

The report calls for greater national co-ordination and a focus on streamlining the commercialisation processes for new antimicrobial resistance solutions and technologies.

It explains that there are a huge range of technologies – from kitchen sprays that change colour when dangerous bugs are present to toilets that detect and disarm harmful microbes before they reach our waterways – that could alleviate the looming crisis, but that a co-ordinated and supportive response was necessary to fast-track solutions and get them into shops and homes faster.

“It’s not as simple as making new drugs to replace those that are failing,” Dr Morgan said.

“And it’s not just about the overuse of antimicrobials – there’s more we can do around the appropriate use and targeting of particular pathogens ... rather than using the atomic bomb type of antibiotics that just kill everything and leave collateral damage as well, which is why it takes the body and gut so long to get over a course of antibiotics.”

The report drew on the expertise of more than 100 multidisciplinary experts across government, academia and industry and looked at a range of potentially impactful technologies such as integrated surveillance and sensing solutions, point-of-care diagnostics, vaccination technologies antimicrobial surfaces and air sterilisation technologies.

Meanwhile, Dr Morgan also explained that climate change would also increase the problem facing Australia and the world in the years ahead.

“As things get warmer, microorganisms grow faster and spread to areas where they previously weren’t present, just because of their ability to survive in warmer climes,” she said.

Dr Morgan added the spread could also be accelerated by more extreme weather events such as flooding and drought, for example, when stormwater overflow spreads sewerage throughout the community during times of flooding, or when people cut back on washing their hands to save water in times of drought.

Source: <https://www.nzherald.co.nz/world/total-treatment-failure-terrifying-superbug-crisis-will-kill-millions-and-devastate-world-economy/N3I7755QYBGO3GICYVOR6OOPTE/>