BIZCOMMUNITY

Treatment of Covid with antibiotics could add to the problem of drug resistance

By Adam Mustapha

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Covid-19 is a major global public-health challenge. The pandemic's impacts cut across all sectors. One of the most worrying is its potential impact on antibiotic resistance.

Source: Pixabay

Antibiotic resistance is a situation where bacteria adapt so that they are no longer affected by antibiotic drugs. This adaptation can happen for a number of reasons, including misuse of the medications.

Antibiotic resistance is becoming a major killer: it is forecast to kill over 10 million people globally by 2050 if it's not tackled. Even before the emergence of Covid-19, global use of antibiotics had increased by over 65% (daily distribution and intake) in the last two decades.

The pandemic may aggravate the antibiotic resistance crisis. Hospitals around the world have been using antibiotics extensively in the Covid-19 treatment package, as they have looked for an effective treatment while dealing with the uncertainty surrounding clinical outcomes. But Covid-19 is a viral pneumonia and antibiotics are not designed to treat viral infections. The use of antibiotics in the treatment package could speed up the occurrence of antibiotic resistance.

Covid-19 has had an impact on the available stock of antibiotics in hospitals and communities. Across the globe, increased use of antibiotics has been reported. A study from China showed a significant increase – up to 70% of patients received antibiotics in the early emergence of Covid-19. Excessive use of antibiotics was already the norm in Africa. The emergence of the Covid-19 only aggravated the situation.

A study on the use of antibiotics for Covid-19 management across 10 African countries – Nigeria, South Africa, Ghana, Uganda, Kenya, Botswana, Ethiopia, Liberia, Zimbabwe and Rwanda – showed that antibiotics were recommended in national treatment guidelines for the Covid-19 management package.

This is a disturbing development as antibiotics are not used for viral infection. And not all patients infected with SARS-CoV-2 will come down with bacterial co-infection. Concerns about this were raised in a journal article earlier this year. Excessive use of antibiotics in both clinical and community settings in the effort to treat Covid-19 could fuel the antibiotic resistance

crisis.

To avoid this, strong antibiotic control policies must be applied. The situation also calls for creating awareness and science communication to reach a broad audience. And proper personal hygiene is important to reduce infection.

Misuse of antibiotics

Antibiotic stewardship programmes vary across the world. This difference might affect the general protocol. In this Covid-19 pandemic, antibiotic stewardship has been relaxed in hospitals that have standard policy. In some, where standard and effective policy is missing, antibiotics are grossly misused. Antibiotics are being prescribed to Covid-19 patients regardless of whether there is bacterial infection.

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Many doctors prescribe treatment with antibiotics because they believe bacterial pathogens could use the conditions created by Covid-19 to infect individuals. Another reason is that some symptoms of Covid-19 resemble bacterial infections. Clinicians tend to start treatment with broad antibiotics without waiting for laboratory confirmation. In addition, the possibility of secondary bacterial co-infection has pushed the use of antibiotics, even when there is no evidence that some patients need them.

Available data show that Covid-19 co-infection with bacteria is not as great a risk as projected. In fact, bacterial infections associated with Covid-19 are minimal, even among hospitalised Covid-19 patients.

When Covid-19 emerged, misuse of antibiotics increased, even among healthy individuals without any symptoms. Some people started taking antibiotics just in case, because they didn't know what to expect. This practice affected the supply of antibiotics. It may also have a long-term effect on the antibiotic resistance rate. Pseudoscience and misinformation contribute to the unnecessary use of these drugs, where people with mild or even no symptoms use antibiotics to treat a viral pneumonia.

The use of antibiotics when they are not needed is the leading driver of resistance. Other consequences are pressure on supply of antibiotics, and production of counterfeit agents.

Stricter controls

The use of antibiotics in the treatment package of Covid-19 should only be based on evidence of bacterial infections and appropriate antibiotics susceptibility testing. There is a need to apply caution, otherwise the post-antibiotics era could arrive earlier than expected.

Strict antibiotic stewardship is necessary at all levels. There is a need for standard antibiotic guidelines in the treatment package of Covid-19.Importantly, surveillance systems must be put in place. These systems should provide new data on antibiotic use and the resistance patterns in all regions worldwide

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