Antibiotic resistance occurs when certain bacteria survive an antibiotic treatment. These bacteria can then spread to other animals, or people, according to the head of the World Organization for Animal Health (OIE), in Paris, France. "These failures are happening more and more often whereas 20 years ago these same treatments worked well," said Bernard Vallat, DVM, director general of the OIE.

While antibiotic resistance actually stems less often from treatment in horses than in animals from developed countries, such as the United States and Canada and most European countries, much of this resistance stems from home treatments with antibiotics. "People check in their medicine cabinets and find some leftover antibiotics and decide to treat their horses with them, because it worked for something similar before, and it's less expensive than calling the veterinarian," Vallat said. "But every antibiotic treatment should be based obligatorily on a clinical exam by a licensed veterinarian and, preferably, an antibiogram as well."

Antibiotic resistance in horses is not a problem unique to the United States. "Horses worldwide are suffering the effects of antibiotic resistance, rendering antibiotic treatment for a variety of infections ineffective. However, better education of both veterinarians and owners is necessary in order to slow the advance of antibiotic-resistant germs," said Vallat.

"Owners also need to avoid the temptation of ordering antibiotics for their horses (or themselves) online, Vallat added. Not only are these antibiotics not necessarily targeted for the strain of bacteria responsible for them, but they're often of lower quality than they're made out to be. "They'll be marketed in packages that look like the real thing, but these cheaper imitations are often diluted versions of the actual drug, with much lower quantities of active ingredient than what they're advertised to have," Vallat said. "Of course, such lower doses of the antibiotic are very conducive to the survival of the germ and, hence, the development of resistant strains."

An antibiogram is a laboratory analysis of the bacteria responsible for an illness. The antibiogram determines which antibiotics are effective against the bacteria and which are not. As part of its World Antibiotic Awareness Week, the OIE has published helpful recommendations for owners and veterinarians to follow in order to prevent the development of antibiotic resistance.

"Owners should also follow their veterinarians' instructions carefully, giving the full dose for the prescribed number of days. As part of its World Antibiotic Awareness Week, the OIE has published helpful recommendations for owners and veterinarians to follow in order to prevent the development of antibiotic resistance. "We must be aware that bacteria know no boundaries, and the most dangerous strains come from countries still lacking in important regulations (concerning antibiotics)," he said. "We must be aware that bacteria know no boundaries, and the most dangerous strains come from countries still lacking in important regulations (concerning antibiotics)," he said.