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Antibiotic Resistance is a Tragedy of the Commons That Necessitates Global Cooperation

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Extract

Antibiotic resistance presents a classic example of the “tragedy of the commons.” In this eponymous tragedy, the commons — shared, public access lands — are overgrazed because farmers can send their livestock onto the land at a zero price. The “tragedy” occurs because overgrazing destroys the land and reduces its ability to provide fodder. The application to antibiotics is obvious: the use of antibiotics creates selection pressure leading to increased proportions of resistant bacteria in the patient and the environment. The increase in frequency of resistant organisms diminishes the effectiveness of antibiotics in treating future infections; thus, the long-term value of the antimicrobial resource is reduced.

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