Global Trends: Antibiotic Resistance

Antimicrobial resistance (AMR) is the growing resistance of bacteria to widely used antibiotics rendering everyday infections we've become accustomed to ignoring as deadly.[1] AMR has been named a growing threat by the World Health Organization (WHO) for many years and is a developing danger to the public as, due to the COVID-19 pandemic, data has been underreported and research has been underfunded.[2] In particular, the rise of antibiotic resistant bacteria is of greatest importance because it is beginning to affect our "last resort" treatment methods for bacterial infections, meaning, a minor illness that could have been easily cured a couple years ago is now a death sentence. For example, for common infections like *Klebsiella pneumoniae*, a hospital acquired blood infection, carbapenems used to be the most effective antibiotic when all other treatment methods failed[2]; however, now 8% of bloodstream infections are resistant to this antibiotic.[1] This resistance causes an influx of mortality in infections that were once benign.

To prevent the impeding threat of AMR infections, it is important to limit antibiotic use.[2] This responsibility falls both on prescribers who sometimes over-prescribe the medications as a "quick fix", and on patients who tend to not always finish their prescriptions allowing the bacteria to develop resistance. Additionally, focused support on low- and middle-income countries (LMICS) is needed as they are disproportionally affected by the AMR infections due to scarce testing coverage and laboratory capacities.[1] Moreover, stricter sanitation requirements, enhanced data sharing, and more uniform vaccination would limit the frequency of infections worldwide.[1,2] While these solutions seems relatively simple to enact or begin moving toward, it is unlikely they will be implemented early on as many policies in public health are put into place once the threat is publicized and more colloquial in the public eye.

Works Cited

1. “Report Signals Increasing Resistance to Antibiotics in Bacterial Infections in Humans and Need for Better Data.” *World Health Organization*, World Health Organization, 9 Dec. 2022, www.who.int/news/item/09-12-2022-report-signals-increasing-resistance-to-antibiotics-in-bacterial-infections-in-humans-and-need-for-better-data. Accessed 31 Jan. 2023.
2. “Coronavirus Disease 2019.” *Centers for Disease Control and Prevention*, Media Relations, 12 July 2022, www.cdc.gov/media/releases/2022/s0712-Antimicrobial-Resistance.html. Accessed 31 Jan. 2023.