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Appropriate antimicrobial use during the COVID-19 pandemic: not cause for complacency

We welcome the Comment by Zhicheng Wang and colleagues,¹ published in *The Lancet Microbe*, expressing their concerns about the risk of inappropriate antimicrobial use and the associated threat of increasing antimicrobial resistance during the recent COVID-19 surge in China. The authors accurately describe several local characteristics to justify their concerns, including high self-medication and non-prescription medication rates, low knowledge among the public, and the increasing COVID-19 rates that might burden the health-care system and lead to an increase of antimicrobial prescriptions.

Similar concerns existed in Greece, a country with high rates of antimicrobial resistance and high use of antimicrobials.^{2,3} Since 2020, there have been multiple waves of SARS-CoV-2 infection in Greece, with a substantial burden on the health system and a high toll of hospitalisations and deaths.⁴ Local studies have provided important insights on causes of inappropriate antimicrobial use in Greece, including sociocultural determinants, knowledge gaps among prescribers, and increased use of last-line antimicrobials due to the prevalence of antimicrobial-resistant bacterial strains.^{2,5,6}

Despite these observations and the high burden of SARS-CoV-2 infections throughout Greece, the

consumption of antibiotics did not increase during the pandemic. In fact, antibiotic use decreased during the pandemic compared with previous years and penicillins with or without β -lactamase inhibitors were among the most commonly prescribed antimicrobials in the community.³ We believe that use of antimicrobials did not increase during the pandemic due to specific country characteristics, including the structure of the health system, intensive clinical research, close collaboration between the scientific community and governance during the decision-making process, and public awareness initiatives. Such examples include the availability of antimicrobials only through an electronic prescription system, the existence and application of strict COVID-19 treatment algorithms both in hospital and community settings, the direct involvement of the medical community in the management of the pandemic and in the establishment of treatment algorithms, and the high research output of the Greek scientific community, including nationwide treatment trials.^{7,8}

Nevertheless, such positive observations are not cause for complacency. Other factors, such as adherence to preventive measures, uninterrupted application of infection control strategies, awareness, and training, might be equally as important and therefore require attention to prevent emergence and spread of antimicrobial resistance. However, it remains imperative to preserve the effectiveness of available antimicrobials through research and locally tailored prescribing policies and stewardship interventions.

We declare no competing interests.

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