

Beyond COVID-19— a paradigm shift in infection management?

The health and economic impact of multidrug-resistant (MDR) bacteria has continuously grown over the past years, reaching an estimated peak of approximately 700 000 attributable deaths per year.¹ Neglected hygiene, poor compliance with infection control procedures, inappropriate antimicrobial use, and insufficient availability of diagnostics and new effective antibiotics have contributed to this inglorious global record.^{2,3} Despite these alarming figures, infection prevention and treatment have not been considered top priorities on the agendas of most industrialised countries.

This mindset changed abruptly with the emergence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).⁴ The exponential expansion of the pandemic catapulted COVID-19 to the top of national and international priority lists, and people judge the performance of their political leaders on the basis of success in containing the pandemic. The more we realise how much SARS-CoV-2 has changed the world, the more we question the suitability of our prevention, management, and drug development strategies with respect to other major pathogens.

Notably, the population at risk of severe COVID-19, including elderly, immunocompromised, and multimorbid people, largely overlaps with the population at risk of health-care-associated infections (HAIs). Even among high-income countries, there are substantial differences in MDR infection rates, varying between close to zero and more than 50% depending on national strategies and health economic investments.⁵ Will high-income societies continue to accept substantial numbers of avoidable

deaths caused by HAIs while risking an unprecedented economical and societal crisis to protect the same risk group from COVID-19?

Can we import actions from the COVID-19 experience into the HAI field? A combination of strategies, ranging from extended MDR surveillance and clinical guidelines to the development of concepts for remediation of MDR reservoirs and effective incentives for antibiotic development programmes, could strongly limit the burden of HAIs.^{1,3,6} The necessary efforts against nosocomial infections will be substantial but marginal compared with the current activities against COVID-19. The pandemic has changed our ways of thinking and paved the way for more efficient measures against other types of infections; we have learned to deal with epidemiological big data more efficiently, new research networks for innovative research are in place, venture capital will be more easily available for development programmes, and public opinions will back stronger governmental commitments to tackling HAIs. The time has come for a paradigm shift in infection management.

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*Maria J G T Vehreschild,
Evelina Tacconelli, Christian G Giske,
Andreas Peschel
andreas.peschel@uni-tuebingen.de

German Centre for Infection Research, Partner Site Bonn-Cologne, Germany (MJGTV); University of Cologne, Department I of Internal Medicine, Cologne, Germany (MJGTV); Department of Internal Medicine, Infectious Diseases, Goethe University Frankfurt, Frankfurt, Germany (MJGTV); Infectious Diseases Unit, Department of Diagnostics and Public Health, Verona University Hospital, Verona, Italy (ET); Division of Clinical Microbiology, Karolinska

University Hospital, Stockholm, Sweden (CGG); Division of Clinical Microbiology, Department of Laboratory Medicine, Karolinska Institutet, Stockholm, Sweden (CGG); Interfaculty Institute of Microbiology and Infection Medicine (AP) and Cluster of Excellence EXC2124 "Controlling Microbes to Fight Infections" (ET, AP), University of Tübingen, Tübingen 72076, Germany; and German Centre for Infection Research, Partner Site Tübingen, Germany (ET, AP)

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