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SYMPOSIUM



Addressing Antimicrobial Resistance through the Proposed Pandemic Instrument

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SPECIAL SUPPLEMENT TO VOLUME 50.4 • WINTER 2022

Symposium Articles

SYMPOSIUM

**Addressing
Antimicrobial
Resistance
through the
Proposed
Pandemic
Instrument**

Guest Edited by
Steven J. Hoffman,
Kevin Outterson,
and Susan Rogers
Van Katwyk

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*Letter from
the Editor*

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Framing Global AMR Governance

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Introduction

Susan Rogers Van Katwyk and Kevin Outterson

In the wake of COVID-19, the World Health Organization established an Intergovernmental Negotiating Body to negotiate a new instrument for pandemic prevention, preparedness, and response. This special issue of the *Journal of Law, Medicine & Ethics* brings together multidisciplinary scholarship to address the question of whether antimicrobial resistance should be included in this new instrument. Drawing from disciplines including law, anthropology, history, public health, public policy, economics, and veterinary medicine, this special issue explores the inclusion of AMR within the Pandemic Instrument from three perspectives: first, through the lens of global AMR governance, second, from the perspective of technical governance challenges and opportunities affecting the global ability to address AMR and future pandemics, and third, from the perspective of pandemic instrument mechanisms for strengthening global AMR governance. Each paper makes a concrete recommendation with respect to the importance of including AMR within the scope of the pandemic instrument.

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Antimicrobial Resistance Must Be Included in the Pandemic Instrument to Ensure Future Global Pandemic Readiness

Shajoe J. Lake, Susan Rogers Van Katwyk, and Steven J. Hoffman

Governments can practically and efficiently address zoonoses and AMR -- within the text of the new pandemic instrument. We map the overlaps between the efforts needed to address both pandemic threats, including (a) equitable access to medical countermeasures, (b) globally integrated One Health surveillance and monitoring systems, (c) increased technical and laboratory capacity in low- and middle-income countries, and (d) a regulatory framework governing the stewardship of antimicrobials. By outlining potential dual-purpose provisions that could be included in a pandemic instrument, we argue that addressing AMR in the pandemic instrument is practicable, the most effective use of limited time and resources, and provides the best opportunity for future global pandemic readiness.

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A Pandemic Instrument Can Start Turning Collective Problems into Collective Solutions by Governing the Common-Pool Resource of Antimicrobial Effectiveness

Isaac Weldon, Kathy Liddell, Susan Rogers Van Katwyk, Steven J. Hoffman, Timo Minssen, Kevin Outterson, Stephanie Palmer, A.M. Viens, and Jorge Viñuales

To address the complex challenge of global antimicrobial resistance (AMR), a pandemic treaty should include mechanisms that 1) equitably address the access gap for antimicrobials, diagnostic technologies, and alternative therapies; 2) equitably conserve antimicrobials to sustain effectiveness and access across time and space; 3) equitably finance the investment, discovery, development, and distribution of new technologies; and 4) equitably finance and establish greater upstream and midstream infection prevention measures globally. Biodiversity, climate, and nuclear governance offer lessons for addressing these challenges.

Specific Challenges and Opportunities for Global AMR Governance

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A Pandemic Instrument can Optimize the Regime Complex for AMR by Striking a Balance between Centralization and Decentralization

Isaac Weldon, Safaa Yaseen, and Steven J. Hoffman

Global antimicrobial resistance (AMR) is currently governed by a decentralized regime complex composed of multiple institutions with overlapping and sometimes conflicting principles, norms, rules, and procedures. Such a decentralized regime complex provides certain advantages and disadvantages when compared to a centralized regime. A pandemic instrument can optimize the regime complex for AMR by leveraging the strengths of both centralization and decentralization. Existing climate treaties under the UNFCCC offer lessons for achieving this hybrid approach.

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Equitable Access to Antibiotics: A Core Element and Shared Global Responsibility for Pandemic Preparedness and Response
Mengying Ren, Anthony D. So, Sujith J. Chandu, Mirfin Mpundu, Arturo Quizhpe Peralta, Kerstin Åkerfeldt, Anna Karin Sjöblom, and Otto Cars

Securing equitable antibiotic access as an essential component for health system resilience and pandemic preparedness requires a systems perspective. This article discusses key components that need to be coordinated and paired with adequate financing and resources to ensure antibiotic effectiveness as a global public good, which should be central while discussing a new global agreement.

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An Awkward Fit: Antimicrobial Resistance and the Evolution of International Health Politics (1945-2022)

Claas Kirchhelle and Scott H. Podolsky

Despite being acknowledged as a major global health challenge, growing levels of antimicrobial resistance (AMR) in pathogenic and commensal organisms have proven an awkward fit for international health frameworks. This article surveys the history of attempts to coordinate international responses to AMR alongside the origins and evolution of the current international health regulations (IHR). It argues that AMR, which encompasses a vast range of microbial properties and ecological reservoirs, is an awkward fit for the 'organismal' philosophies that centre on the rapid control of individual pathogens that have characterised international policy-making since the 19th century.

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Using the International Pandemic Instrument to Revitalize the Innovation Ecosystem for Antimicrobial R&D

Andrea Morales Caceres, Kshitij Kumar Singh, Timo Minssen, Susan Rogers Van Katwyk, and Steven J. Hoffman

The inclusion of antimicrobial resistance (AMR) and increased research and development (R&D) capabilities in the most recent outline of the World Health Organization's (WHO's) international pandemic instrument signals an opportunity to reshape pharmaceutical R&D system in favour of antimicrobial product development. This article explains why the current innovation ecosystem has disadvantaged the creation of antimicrobial products for human use. It also highlights how the COVID-19 pandemic experience can inform and stimulate international cooperation to implement innovative R&D incentives to bring new, life-saving antimicrobial products to the market.

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Governance Processes and Challenges for Reservation of Antimicrobials Exclusively for Human Use and Restriction of Antimicrobial Use in Animals

J. Scott Weese, Guilherme Antonio Da Costa Junior, Bruno Gonzalez-Zorn, Laura Y. Hardefeldt, Jorge Matheu, Gerard Moulin, Stephen W. Page, Ruby Singh, Junxia Song, and Olafur Valsson

The majority of antimicrobials that are produced are administered to animals, particularly food animals. While the overall impact of antimicrobial use in animals on antimicrobial resistance in humans and the environment is unclear, it undeniably has a role. Yet, some degree of antimicrobial use in animals is necessary for animal health and welfare purposes. Balancing the benefits and risks of antimicrobial use in animals is challenging because of the complexity of the problem and limitations in available data. However, a range of measures can be implemented to reduce, refine and optimize antimicrobial use in animals, with a goal of minimizing the impact on human and environmental health while maintaining necessary therapeutic use in animals. A pandemic instrument can provide the necessary foundation for the whole-of-society and whole-of-government One Health approach that is required to strengthen surveillance, communication, collaboration, and action.

Pandemic Instrument Mechanisms for Strengthening Global AMR Governance

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Adopting a Global AMR Target within the Pandemic Instrument Will Act as a Catalyst for Action

Susan Rogers Van Katwyk, Lindsay Wilson, Isaac Weldon, Steven J. Hoffman, and Mathieu J. Poirier

Ensuring that life-saving antimicrobials remain available as effective treatment options in the face of rapidly rising levels of antimicrobial resistance will require a massive and coordinated global effort. Setting a collective direction for progress is the first step towards aligning global efforts on AMR. This process would be greatly accelerated by adopting a unifying global target — a well-defined global target that unites all countries and sectors. The proposed pandemic instrument — with its focus on prevention, preparedness and response — represents an ideal opportunity to develop and adopt a unifying global target that catalyzes global action on AMR. We propose three key characteristics of a unifying global target for AMR that — if embedded within the pandemic preparedness instrument — could rally public support, funding, and political commitment commensurate with the scale of the AMR challenge.

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A Symposium
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by Michael R.
Ulrich

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**Embed Multisectoral Governance
Mechanisms in the Pandemic Instrument
for One Health Action**

*Michèle Palkovits, Susan Rogers Van
Katwyk, and Steven J. Hoffman*

Despite recognition of the health threat posed at the human-animal-environment interface long ago, One Health has yet to be meaningfully integrated into global pandemic prevention, preparedness, and response. With the negotiation of the forthcoming pandemic instrument under the auspices of the World Health Organization (WHO) — which is inherently restricted by its own constitutional mandate of human health — One Health risks being sidelined once again. Genuine integration of a One Health approach into this treaty will require the institutionalization of formal One Health coordination mechanisms.