Opening to the Policy Brief Webinar:

Strengthening Antimicrobial Stewardship: Policy Insights from COVID-19 and Future Pandemic Preparedness

By: Dr Viviana Munoz







SPEAKERS

Dr. Rasha Abdelsalam Elshenawy

Dr. Rasha Abdelsalam Elshenawy is a consultant in antimicrobial resistance (AMR) at the South Centre, Geneva, Switzerland. Since 2018, she has served as the Director of the FADIC Antimicrobial Stewardship School in the UK. She is also working at the University of Hertfordshire, School of Health, Medicine and Life Science. With over 20 years of experience in clinical pharmacy practice, Dr. Elshenawy collaborates globally to advance antimicrobial stewardship strategies. Her primary research focuses on the impact of COVID-19 on antimicrobial resistance and stewardship and public health. She has authored over 150 publications and conference presentations, demonstrating her commitment to addressing the global AMR crisis.

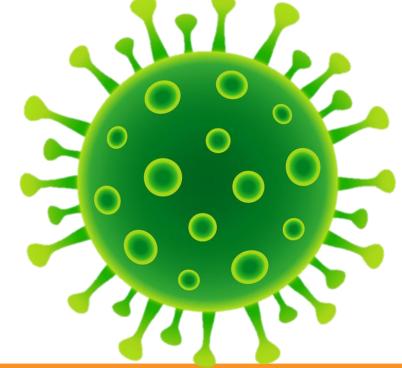




Leveraging Lessons from COVID-19 to Strengthen Antimicrobial Stewardship and Combat AMR

By: Dr Rasha Abdelsalam Elshenawy







The dual pandemics – COVID-19 and antimicrobial resistance (AMR)

How the COVID-19 pandemic disrupted antimicrobial stewardship (AMS) and exacerbated AMR.

Objectives

- Discuss the recent South Centre policy brief on the impact of COVID-19 on antimicrobial stewardship (AMS) and antimicrobial resistance (AMR).
- Highlight key lessons learned from the COVID-19 pandemic.
- Propose policy recommendations to strengthen AMS and address the global threat of AMR.





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Lessons from COVID-19: Strengthening Antimicrobial Stewardship Prior and During Pandemics

By Dr Rasha Abdelsalam Elshenawy

The COVID-19 pandemic has had a complex impact on the silent pandemic of antimicrobial resistance (AMR). While increased antibiotic misuse and disrupted antimicrobial stewardship (AMS) programs exacerbated AMR in some settings, heightened awareness and improved infection prevention measures implemented to control COVID-19 provided valuable lessons on sustaining these practices in the fight against AMR. This brief highlights lessons learned from the pandemic, such as the importance of access to antimicrobials and the urgent need for resilient and sustainable AMS integrated into pandemic preparedness, strengthening infection prevention and surveillance systems, enhancing access and use of diagnostics, and promoting a One Health approach. By leveraging these lessons, policymakers can build more resilient health systems, maintain the effectiveness of antimicrobials and be better prepared for future pandemics, particularly in developing countries. Immediate action is essential to protect public health and combat AMR

La pandémie de COVID-19 a eu un impact complexe sur la pandémie silencieuse de la résistance aux antimicrobiens (RAM). Alors que l'augmentation de la mauvaise utilisation des antibiotiques et la perturbation des programmes de gestion des antimicrobiens ont exacerbé la RAM dans certains contextes, la sensibilisation accrue et l'amélioration des mesures de prévention des infections mises en œuvre pour contrôler le COVID-19 ont permis de tirer des enseignements précieux sur le maintien de ces pratiques dans la lutte contre la résistance aux antimicrobiens. Ce document met en lumière les enseignements tirés de la pandémie, tels que l'importance de l'accès aux antimicrobiens et le besoin urgent de programmes de gestion des antimicrobiens résilients et durables, intégrés dans la préparation à la pandémie, le renforcement des systèmes de prévention et de surveillance des infections. l'amélioration de l'accès et de l'utilisation des diagnostics et la promotion d'une approche « Une seule santé ». En tirant parti de ces enseignements, les décideurs politiques peuvent mettre en place des systèmes de santé plus résistants, maintenir l'efficacité des antimicrobiens et être mieux préparés aux futures pandémies, en particulier dans les pays en développement. Il est essentiel d'agir rapidement pour protéger la santé publique et lutter efficacement contre la résistance aux antimicrobiens.

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Lessons from COVID-19: Strengthening Antimicrobial Stewardship Prior and During Pandemics





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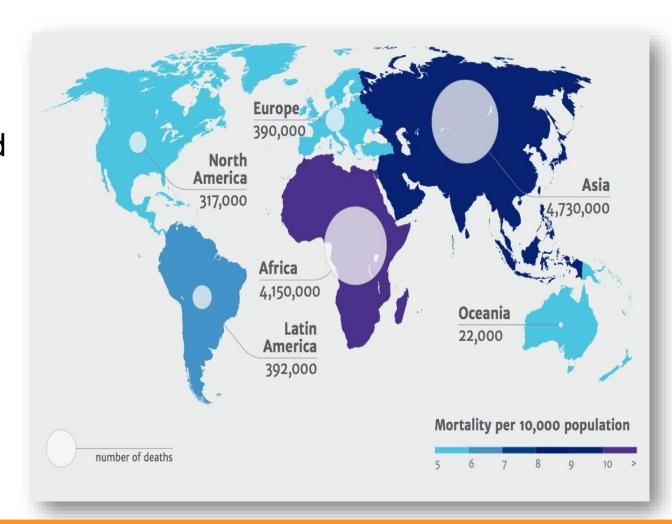
1. Impact of COVID-19 on Antimicrobial Stewardship

AMR as a Global Health Threat

Current Impact of AMR:

- 1.14 million deaths annually attributed directly to AMR.
- Expected to rise to 10 million deaths per year by 2050.
- Disproportionate impact on LMICs.

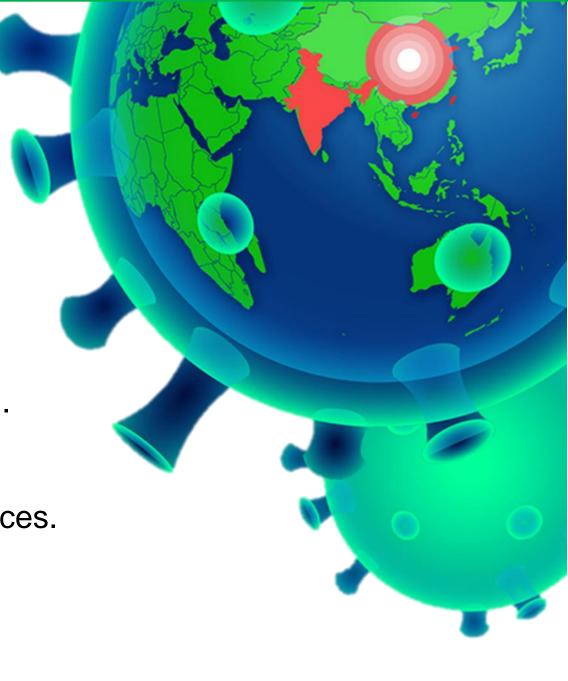




AMR as a Global Health Threat

Key Drivers of AMR:

- Unregulated antibiotic use.
- Weak infection prevention and control (IPC).
- Limited access to diagnostics.
- Inadequate antimicrobial stewardship practices.





COVID-19's Impact on AMR and AMS

Increased Antimicrobial Misuse:

- 37–75% of hospitalized COVID-19 patients received antibiotics, despite low bacterial co-infection rates (8–16%).
- Rise in multidrug-resistant organisms (e.g., Carbapenem-resistant Acinetobacter baumannii, Candida auris).



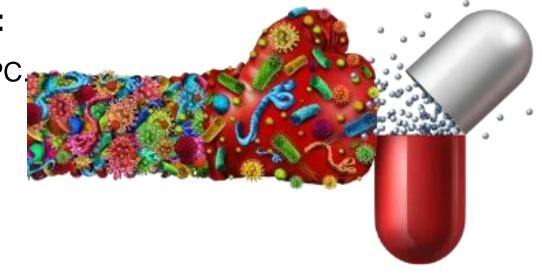
COVID-19's Impact on AMR and AMS

Disruption of Antimicrobial Stewardship (AMS) Programs:

- AMS audits, reviews, and education deprioritized.
- "AMS fatigue" among prescribers.

Infection Prevention and Control Challenges:

- Overwhelmed hospitals led to lapses in hygiene and IPC.
- Increased healthcare-associated infections (HAIs).

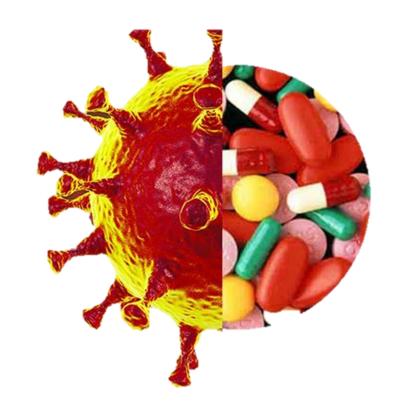




The dual pandemics – COVID-19 and antimicrobial resistance (AMR)

How the COVID-19 pandemic disrupted antimicrobial stewardship (AMS) and exacerbated AMR.

- The pandemic led to increased antibiotic misuse and weakened infection prevention.
- AMR surveillance was compromised, particularly in lowand middle-income countries (LMICs).
- Sustainable AMS must be integrated into pandemic preparedness efforts.
- The One Health approach is critical for tackling AMR across human, animal, and environmental sectors.



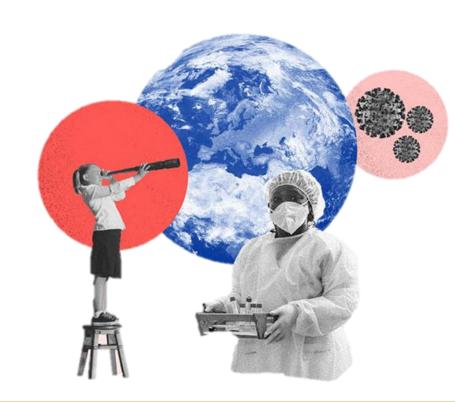


2. Lessons from COVID-19 to Strengthen AMS



Lesson 1 – Embedding AMS in Pandemic Response Plans

- **Strengthen AMS frameworks** to prevent antibiotic misuse in emergencies.
- Integrate AMS into national and global pandemic plans with clear roles and resources.
- **Enhance real-time surveillance** to track antibiotic use and resistance.
- **Invest in AMS training** for healthcare workers.
- Ensure equitable access to antibiotics and stewardship resources globally.





Lesson 2 - Strengthening AMR Surveillance Systems

- Real-time data sharing enhances AMR tracking.
- Leverage technology (digital dashboards, automated reporting) for surveillance.
- Strengthen international collaboration (e.g., GLASS) to improve AMR response.

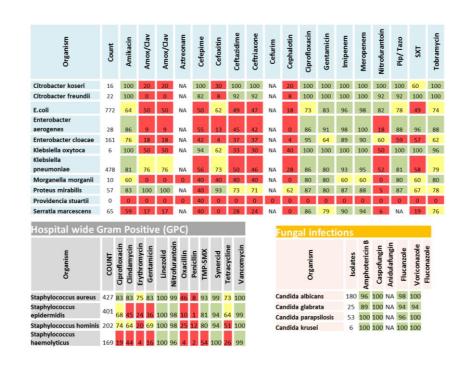


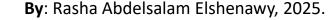




Lesson 3 – Diagnostics Infrastructure

- **Invest in diagnostics** to improve infection differentiation and reduce antibiotic misuse.
- **Expand point-of-care testing (POCT)** for faster bacterial vs. viral infection identification.
- Integrate antibiograms into clinical decisionmaking.









Lesson 4 – Rational Antibiotic Use & Training

- Adhere to evidence-based guidelines to optimise antibiotic prescribing.
- Enhance public education on AMR risks and appropriate antibiotic use.
- Ensure continuous training for healthcare professionals on resistance trends and stewardship.
- Provide updated prescribing tools (antibiograms, resistance data),
- Promote equitable access to medicines and diagnostics worldwide.



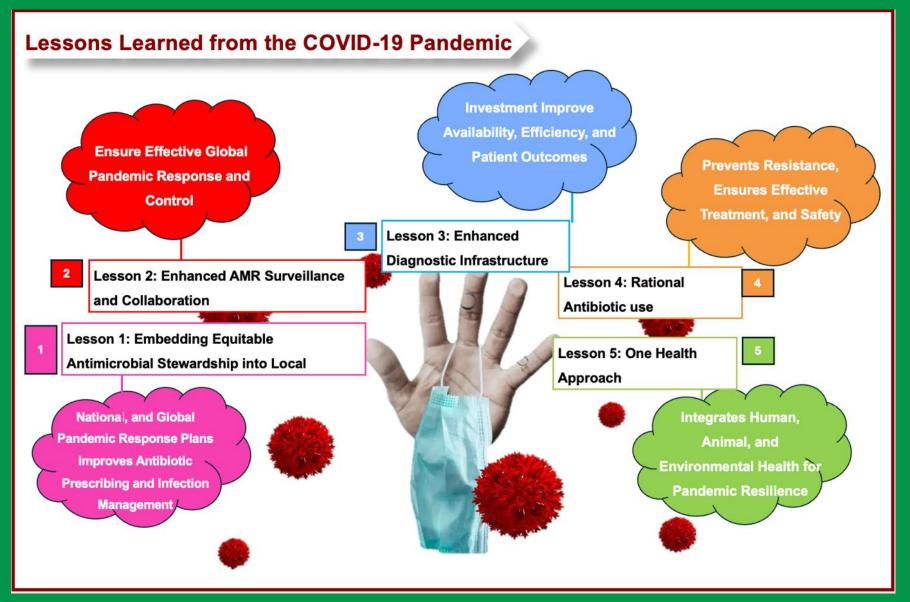


Lesson 5 – One Health Approach for AMR Control

- Strengthen cross-sector collaboration across human, veterinary, and environmental health.
- Implement policies on antimicrobial use in agriculture to curb resistance.
- Improve data sharing & regulations for pharmaceutical waste management.
- **Invest in One Health infrastructure** for diagnostics, surveillance, and stewardship.
- Ensure equitable distribution of AMS resources to low-resource settings.



Lessons from COVID-19 for Emergency Preparedness





3. Recommendations and Call to Action





Addressing Sustainable Access to Antimicrobials

- Strengthen supply chain resilience for antimicrobials and diagnostics.
- Prevent over-the-counter antibiotic sales through strict regulatory frameworks.





Strengthening AMS in Global Health Policy

- Ensure AMS integration into universal health coverage (UHC) frameworks.
- Scale up AMS education for healthcare professionals and prescribers.





Enhancing Surveillance and Diagnostics

- Standardize AMR reporting in LMICs.
- Expand digital health solutions for real-time AMR monitoring.





Enforcing Regulatory Measures

- Implement strict guidelines for antimicrobial use in human and veterinary medicine.
- Strengthen governance on antimicrobial waste disposal.





Promoting Education and Awareness

- Launch global AMR awareness campaigns.
- Integrate AMS training into medical and pharmacy education.





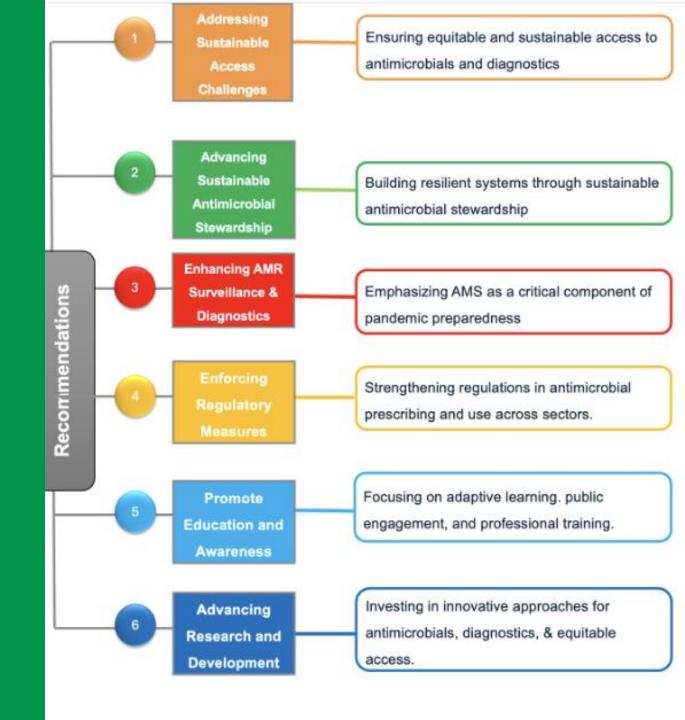
Advancing Research and Development

- Invest in new antimicrobial therapies and alternative treatments.
- Leverage digital tools to improve AMR data collection and analysis.

Key Recommendations

To Strengthen Antimicrobial Stewardship and maintain emergency preparedness

Six critical issues need to be prepared.



Conclusion

COVID-19 exposed critical gaps in AMS and AMR surveillance.

Urgent Need for Action

- Strengthen AMS in pandemic preparedness.
- Ensure equitable access to antimicrobials and diagnostics.
- Implement One Health-driven AMR strategies.
- Policymakers, healthcare leaders, and global health organizations must act now to build resilient AMS frameworks and prevent the next AMR crisis.







Lessons from COVID-19: Strengthening Antimicrobial Stewardship Prior and During Pandemics

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ABSTRACT

The COVID-19 pandemic has had a complex impact on the silent pandemic of antimicrobial resistance (AMR). While increased antibiotic misuse and disrupted antimicrobial stewardship (AMS) programs exacerbated AMR in some settings, heightened awareness and improved infection prevention measures implemented to control COVID-19 provided valuable lessons on sustaining these practices in the fight against AMR. This brief highlights lessons learned from the pandemic, such as the importance of access to antimicrobials and the urgent need for resilient and sustainable AMS integrated into pandemic preparedness, strengthening infection prevention and surveillance systems, enhancing access and use of diagnostics, and promoting a One Health approach. By leveraging these lessons, policymakers can build more resilient health systems. maintain the effectiveness of antimicrobials and be better prepared for future pandemics, particularly in developing countries. Immediate action is essential to protect public health and combat AMR effectively.

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* Dr Rasha Abdelsalam Elshenawy is a Consultant on Antimicrobial Resistance (AMR), South Centre.

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. Surveillance Gaps: Limited laboratory capacities

. Lessons from COVID-19: Integrating AMS into

. One Health Approach: Tackling AMR effectively

Global Collaboration: Strengthening international



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6. Advancing Research and Development

ne COVID-19 pandemic highlighted the critical need for robust search and development (R&D) to confront AMR. Funding inovation in antimicrobials, vaccines, and diagnostics is essential address current gaps and future threats. Special emphasis ust be placed on ensuring equitable access to these advanceents, particularly in developing countries, where disparities in ealthcare resources hinder AMR containment.

dopting innovative approaches in antibiotic research is vi-Combining traditional methods with digital tools facilitates ata collection, analysis, and dissemination. Mobile-integrated search tools can be employed for surveys and interviews, hancing accessibility and efficiency. OR codes and other dital methods can help engage broader healthcare workforces, proving the integration of diverse perspectives in research.

he pandemic also emphasized the importance of leveraging rtual and digital platforms for communication with research opulations. Tools like video conferencing and online collabotion platforms allow researchers to maintain momentum and roaden their reach, even during global crises.

amplify the impact of the research, diverse communication nannels must be used. Blogs, community posts, correspondenresearch papers, visual abstracts, and infographics effectiely engage different audiences. Such multi-faceted dissemiation strategies ensure findings are accessible and actionable, stering collaboration and innovation in the fight against AMR.

D-19 - Strengthening Antimicrobial Stewardship Abdelsalam Elshenawy)

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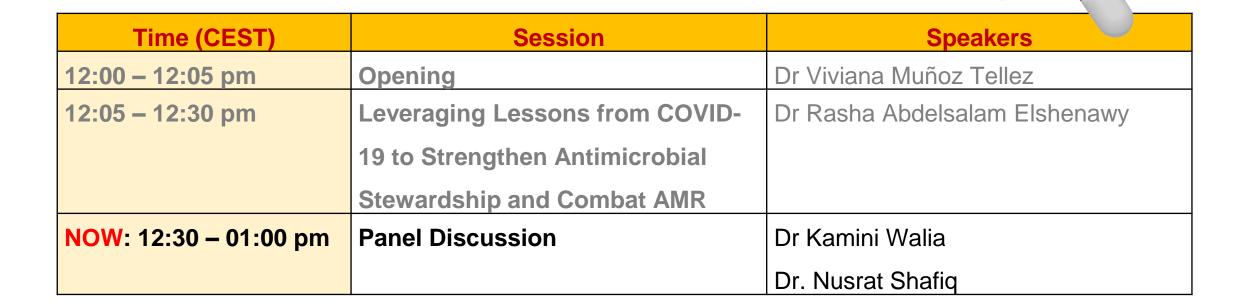
Thank You

By: Dr Rasha Abdelsalam Elshenawy

@Salam_Rasha



Panel Discussion (30 minutes)

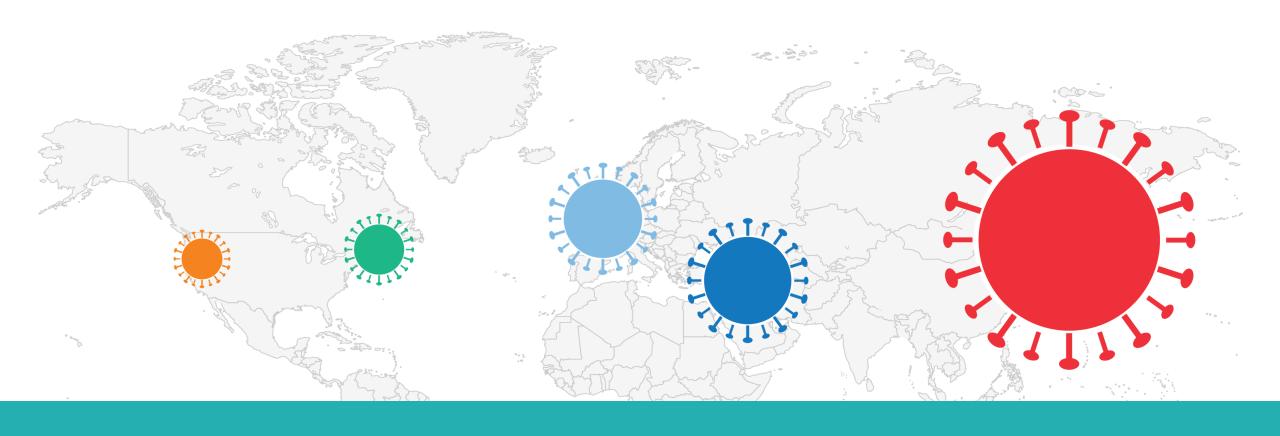








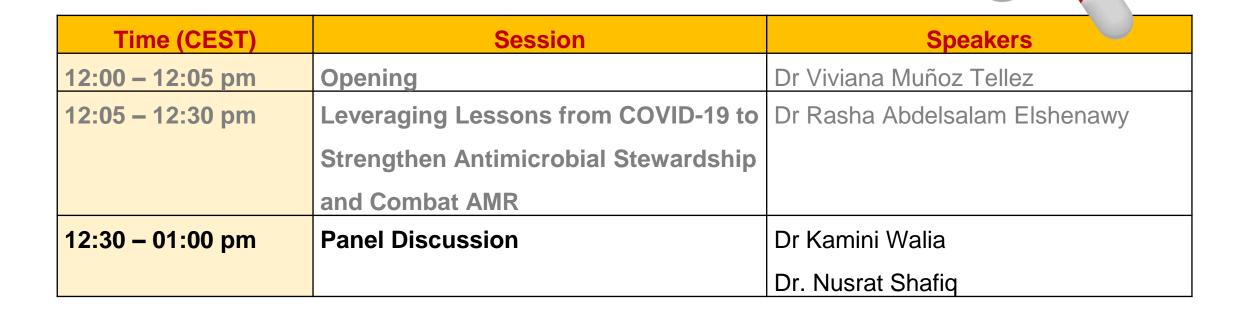




Panel Discussion



Panel Discussion (30 minutes)







Panel Discussion





PANELLISTS:

Dr. Kamini Walia

Dr Kamini Walia is a senior scientist at the Indian Council of Medical Research (ICMR), leading its Antimicrobial Resistance Initiative. She specialises in AMR surveillance, antimicrobial stewardship, and One Health. With over 20 years of public health experience, she has led key projects in infectious diseases and diagnostics. She previously served as Director of Research and Development at PATH and was a WHO expert on essential diagnostics.









Commentary on the Policy Brief

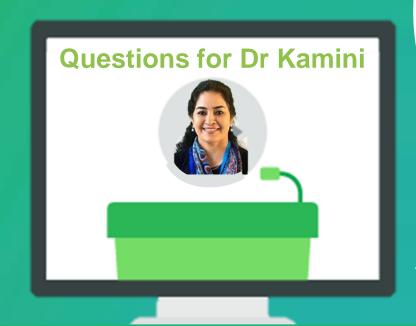
What are the key antimicrobial stewardship lessons learned from the COVID-19 pandemic?





What actions should governments prioritize to strengthen AMS?



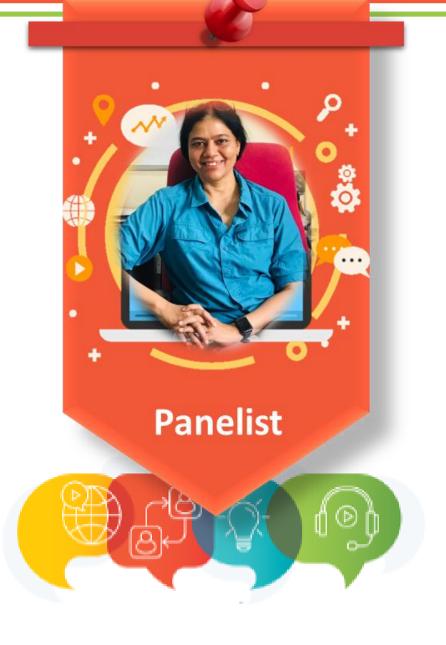


What strategies can be implemented to sustain AMS efforts in low- and middle-income countries (LMICs)?

PANELLISTS:

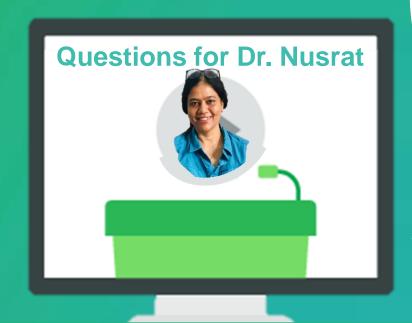
Dr. Nusrat Shafiq

Pharmacology Unit, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India, and a former President of the Society for Antimicrobial Stewardship Practices in India. She currently serves as the Principal Investigator for the India Hub of the Consortium of Antimicrobial Optimization Network, supported by the Wellcome Trust.





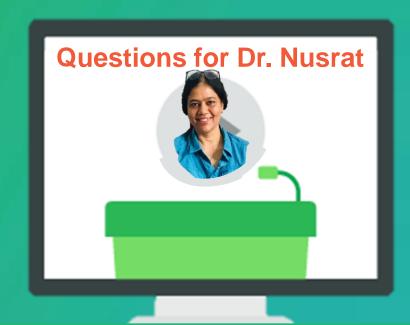




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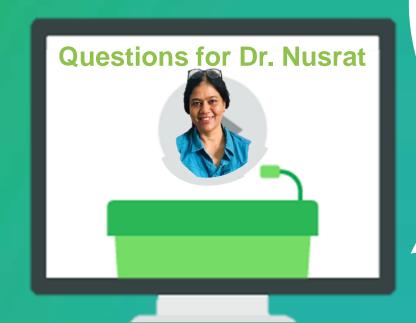
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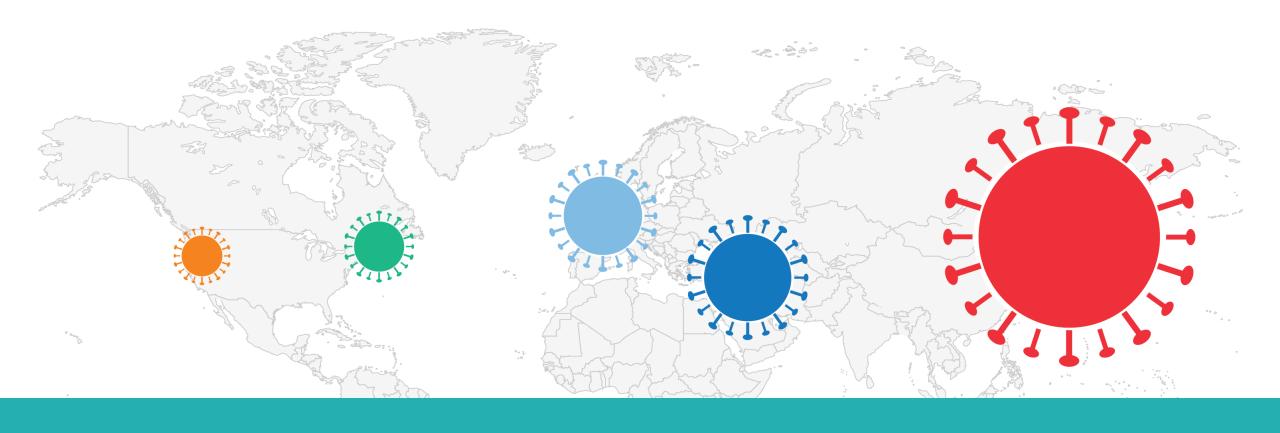


What are the key challenges in implementing effective antimicrobial stewardship practices in LMICs





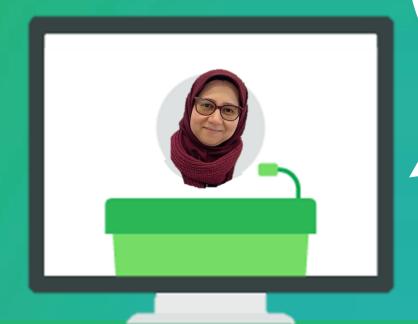
What strategies do you recommend for optimizing antimicrobial stewardship practices in health emergencies such as COVID-19?



Conclusion







Final Closing Question:

What is the most critical takeaway from this discussion for policymakers and healthcare leaders?







Closing for the Policy Brief Webinar:

Strengthening Antimicrobial Stewardship: Policy Insights from COVID-19 and
Preparing for Future Pandemics

By: Dr Viviana Munoz







Thank You



