

Antimicrobial Resistance

Streamlining Diagnostic Supply Chains and Sourcing for LMICs

The Partnership for Supply Chain Management

Dr. Timothy Meehan, Senior Laboratory Technical Advisor



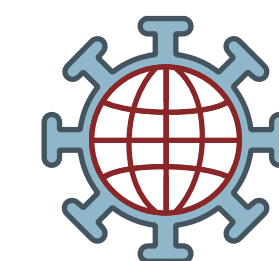
The causes of AMR

- Antimicrobial resistance (AMR) occurs in microorganisms such as bacteria, parasites, viruses and fungi when microorganisms evolve survival adaptations in response to exposure to antimicrobial drugs.¹
- The use of antibiotics for growth promotion in feed animals and antibiotic contaminated wastewater also contributes to AMR.
- Addressing AMR requires a joint, One Health approach across human, animal and environmental health.²



The burden is especially great in LMICs and threatens global health security

- Although AMR is of global concern, the burden of AMR is most acutely felt in low- and middle-income countries (LMICs), and the majority of AMR related deaths occur in sub-Saharan Africa.⁴
- Limited access to diagnostics essential to guide treatments and inform surveillance is a significant factor in AMR related morbidity in LMICs.⁵
- Addressing the spread of AMR in LMICs is important to health security in all countries.

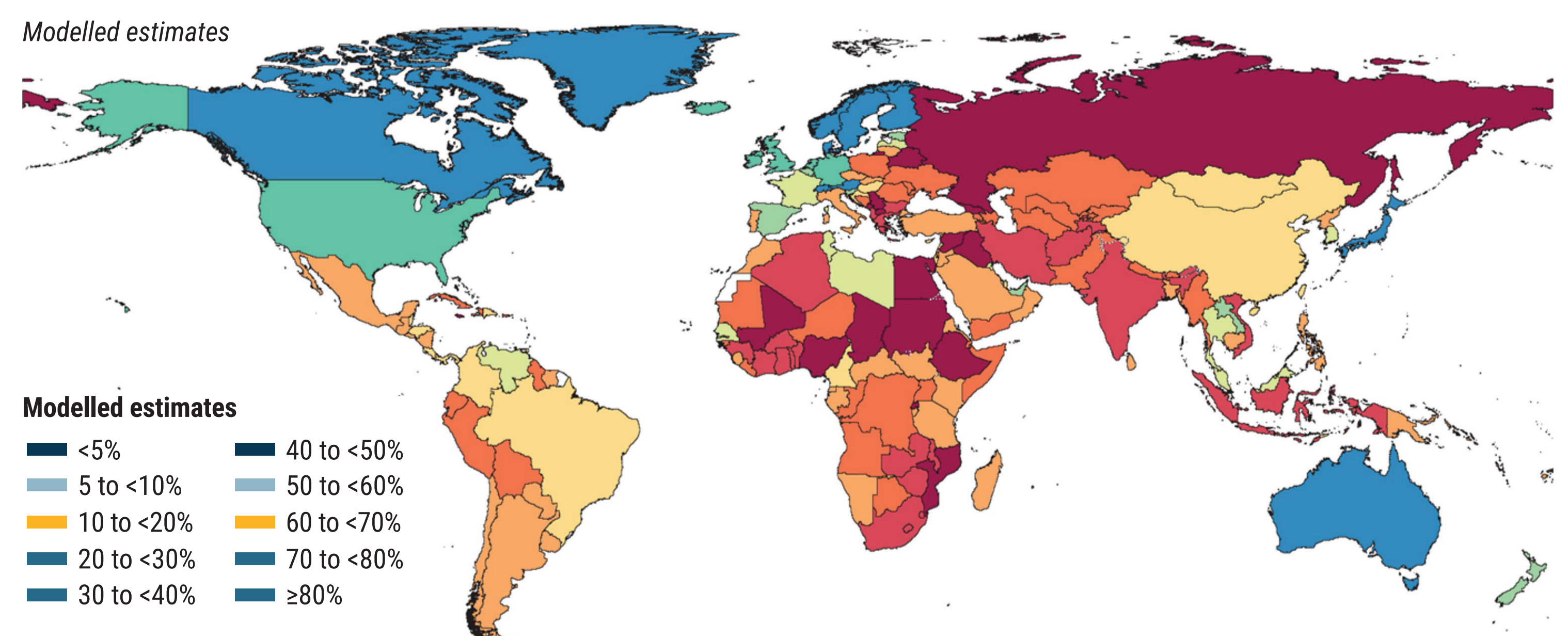


The silent epidemic

- AMR is a global threat to health, food security, and economic development.
- It is estimated that 4.95 million deaths were associated with bacterial AMR in 2019 making AMR at least as deadly as HIV or malaria.³
- AMR threatens the effective prevention and treatment of infections caused by bacteria, parasites, viruses and fungi, and is a common comorbidity of other diseases such as HIV.



3rd generation cephalosporin-resistance *Klebsiella pneumoniae*



PFSCM's role in the fight against AMR



PFSCM is a nonprofit, diversified supply chain solutions provider and procurement services agent providing sourcing, procurement, and logistics of health commodities for LMICs.

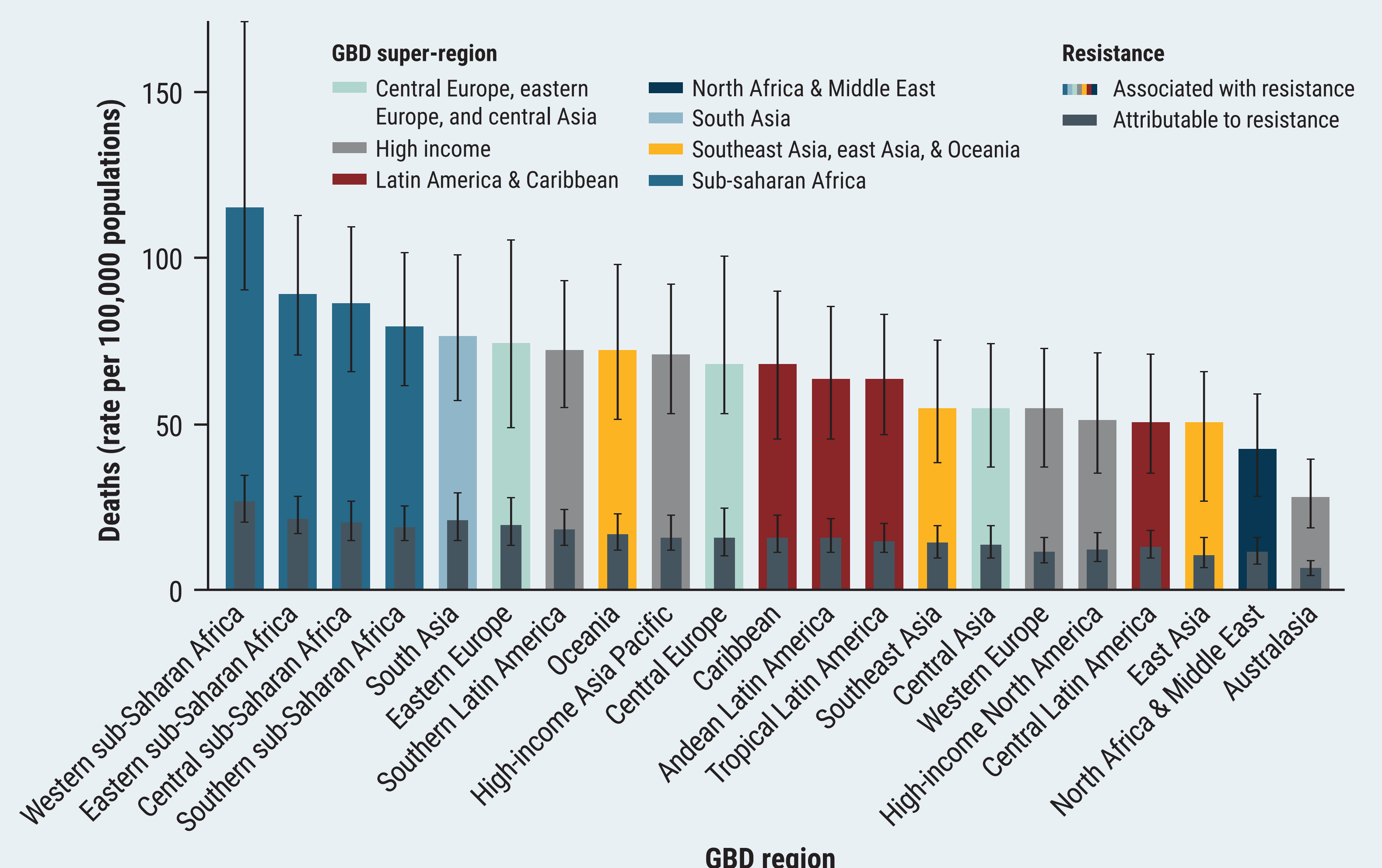


PFSCM offers complete strategic sourcing, supply chain, and 4PL solutions including forecasting, demand planning, product quality assurance and quality control testing, upstream and last-mile logistics, end-to-end shipment tracking, and storage and warehousing.



PFSCM is leveraging our expertise building lab capacity, providing technical support, and strengthening supply chains to ensure greater access to the tools needed to fight AMR.

All-age rate of deaths attributable to and associated with bacterial antimicrobial resistance



References

- Lawrence, R., Jeyakumar, E. Antimicrobial Resistance: A Cause for Global Concern. BMC Proc 7 (Suppl 3), S1 (2013).
- World Health Organization. Antimicrobial Resistance: Global Report on Surveillance. 2014.
- Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis, Murray, C. et al., The Lancet, vol. 399, issue 10325, pg 629-655, Feb 12, 2022.
- Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis, Murray, C. et al., The Lancet, vol. 399, issue 10325, pg 629-655, Feb 12, 2022.
- Antimicrobial Resistance Collaborators. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. Lancet. 2022.