

ONE YOUNG WORLD ACADEMY

WINNING COURSEWORK

TITLE: How can zoonosis, antimicrobial resistance, or sanitation be prevented from becoming greater threats?

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Antimicrobial resistance (AMR) is a global health and development threat. It requires urgent multisectoral action in order to achieve the Sustainable Development Goals (SDGs). Zoonosis, antimicrobial resistance or sanitation can be prevented from becoming greater threats by coordinated actions. AMR is a complex problem that requires a united multisectoral approach. The One Health approach brings together multiple sectors and stakeholders engaged in human, terrestrial and aquatic animal and plant health, food and feed production and the environment to communicate and work together in the design and implementation of programmes, policies, legislation and research to attain better public health outcomes.

Greater innovation and investment are required in operational research, and in research and development of new antimicrobial medicines, vaccines, and diagnostic tools. The launch of the Antimicrobial Resistance Multi Partner Trust Fund (AMR MPTF), the Global Antibiotic Research & Development Partnership (GARDP), AMR Action Fund and other funds and initiatives could fill a major funding gap. Countries including developing countries need to be committed to the framework set out in the Global Action Plan on AMR during the 2015 World Health Assembly and committed to the development and implementation of multisectoral national action plans to ensure global progress, countries need to ensure costing and implementation of national action plans across sectors to ensure sustainable progress and provide a framework of interventions to slow the emergence and reduce the spread of AMR.

Controlling and preventing zoonotic outbreaks requires coordinated interdisciplinary responses across human, animal and environmental health. Our responses to both controlling the ongoing COVID-19 pandemic and to reducing the risk of future zoonotic disease outbreaks must address a range of areas. In the immediate crisis, a public health response must be mounted, financed and managed. Maintaining the global food system is a top priority, as is providing additional social protection for poor, vulnerable and marginalized populations. A clear exit strategy from pandemic responses is needed, as are sustainable ways of rebuilding damaged economies while not sacrificing long-term social and environmental achievements.

Break down traditional sectoral barriers to achieve effective control of zoonoses, without more fundamental knowledge of pathogen epidemiology and more rapid and inexpensive genome sequencing, every new serious emerging disease will continue to take us by surprise. However, additional investments in new technologies, particularly biotechnologies and information and communication technologies, could stimulate the innovation of “gamechangers” in disease surveillance, rapid response and control. Specific improvements in biosecurity are critical for detecting, preventing and controlling zoonotic disease outbreaks, and for implementing rapid and adequate emergency responses. These include preventive measures designed to reduce risk of infectious disease transmission in crops, livestock, quarantined pests, invasive alien species and living modified organisms. While several studies found that biosecurity advice and policy are often sound, there is limited implementation of biosecurity.

Successful control of zoonoses requires strong policy frameworks and judicial legal mechanisms to accompany policy frameworks. It also demands well functioning institutions that have adequate capacity, adequate financing and a clear plan for implementing interventions.

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