

ACRONYM: ASB

Title: Aligning industry incentives with AMR control goals: Exploring the feasibility of an antibiotic susceptibility bonus for drugs to treat Gram-negative infection

Keywords: Antimicrobial resistance, antibiotics, incentives, pharmaceutical industry, research & development, innovation, antibiotic conservation

Consortium composition:

Type	Name	Institute	Country
C	Hollis, Aidan	University of Calgary, Economics	Canada
P	Stephan Harbarth	University of Geneva, Hospitals and Faculty of Medicine, Infection Control Programme	Switzerland
P	Olof Lindahl	Department of Business Studies, Uppsala University	Sweden

Abstract:

High prices create incentives for industry to develop new antibiotics, but also incentivize firms to promote their products to maximize sales volume. Similarly, the Market Entry Rewards proposed by the O'Neill Commission and others will, if introduced, help to get new drugs to market but do not directly address the problem of antibiotic overuse leading to emergence and spread of antimicrobial resistance (AMR) (O'Neill 2016). The multidisciplinary study proposed here explores the feasibility of a finance-based intervention intended to directly re-align pharmaceutical industry interests with the minimization of AMR and with the overall prolongation of antibiotic efficacy through time. The proposed intervention allows pharmaceutical companies to qualify for staged bonuses if pathogen susceptibility to their antibiotic remains above a given threshold, despite a certain minimum volume of usage.

This Antibiotic Susceptibility Bonus may help maximize efforts towards good prescribing practice and towards minimizing the risk of acquisition, development and transmission of antibiotic-resistant Gram-negative bacteria. The lure of a bonus greater than expected revenues from unit sales could help align efforts behind antibiotic stewardship and infection prevention efforts in hospitals, communities, agriculture, and the environment, bolstering public and private AMR initiatives across One Health sectors.

This project will evaluate the feasibility and potential impact of the Antibiotic Susceptibility Bonus. It will address the difficulties involved in: i) developing a general measure of susceptibility; ii) calculating optimal bonuses based on realistic market considerations; iii) assessing product utility and accessibility. This will be done through 2-3 case studies of actual late stage (Phase III) candidate antibiotics and an existing product with particular antimicrobial features – each targeting multi-resistant Gram-negative bacteria.