

# World Congress and Exhibition on Antibiotics

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## Antibiotic resistance: The holistic viewpoint of outcomes and costs

Antibiotic resistance is an increasing phenomenon in clinical practice with most common pathogens exhibiting one form of resistance or another. However it is the emergence of multi-drug resistant (MDR) pathogens that are grabbing the headlines. Moreover unlike cancer drugs antibiotics can save lives as has been demonstrated over the past 6 decades with pneumonia. This familiarity with antibiotics has led to a “generalization” of the class by the public. It is this conundrum which underpins the current paucity of new antibiotics being developed. The immediate clinical impact of these MDR infections is clear with the use of more drugs, longer hospital and intensive unit stays occurring widely. Moreover the financial impact of multi-drug resistant Gram negative infections has recently been analyzed. *P. aeruginosa* was reported by Morales et al. that MDR PA infections cost 15,265 Euros compared with 4,933 for a susceptible strain of PA. This increase is particularly important when considering infections such as nosocomial pneumonia of which 30% are due to PA and of these >40% are MDR *P. aeruginosa* is the 3<sup>rd</sup> most common causative agent of nosocomial infections. These individualistic data should be part of the over-arching calculation for the value of new antibiotics, indeed a recent evaluation by ERG indicates the overall costs of certain infections indicate that a bigger financial and social impact is due to MDR pathogens. These data cover the totality of costs or holistic outcomes. Unfortunately these important data are not widely known nor appreciated by many stakeholders involved in drug formulation processes. As O’Neill et al. describe the critical need for new antibiotics but with the likely strict stewardship applied to new agents their use is likely to be highly controlled. This situation is a dis-incentive to pharmaceutical companies who are considering investing in this space. Although the overall numbers of MDR infections are relatively low their clinical and financial impact is escalating with costs growing beyond mere drug budgets. As we wait the O’Neil team’s recommendations being implemented it is imperative that the holistic impact of antibiotic resistance be assimilated and integrated into decision making. We need a realistic price to be assigned to new life-saving antibiotics so that essential resources will be invested.

## Biography

Glenn Tillotson has 30+ years pharmaceutical experience in early pre-clinical and clinical research, commercialization, medical affairs, scientific communications including publication planning strategic drug development, life cycle management and global launch programs. Dr Tillotson has been instrumental in the development and launch of ciprofloxacin, moxifloxacin, gemifloxacin and other antibacterials. Glenn has held several key committee positions at the American College of Chest Physicians, he is on the Scientific Steering Committee for the GTCBio. Annual Summit on Anti-infective Partnering. Currently Dr Tillotson has published >140 peer-reviewed manuscripts, presented >270 scientific posters and is on several journal Editorial Advisory Boards including the Lancet Infectious Disease, eBioMedicine and F1000.

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