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Prescribing antibiotics without considering the risk of resistance is no longer possible today. First, antibiotic resistance is rising to high levels across the world, threatening ability to treat infectious diseases, even the most common ones. Second, antibiotic resistance is accelerated by the misuse of antibiotics and poor infection prevention and control.

In hospitals and community settings, ongoing research takes a holistic approach by addressing different aspects: diagnosis, treatment and prevention. We are conducting several descriptive studies with the objective of filling in data gaps on the etiologies of bacterial infections, antibiotic resistance and to adapt therapeutic protocols.

The presentation will be based on, first, several etiology studies in children in sub-Saharan Africa; and next on documentation of how antibiotic are prescribed. This provides an insight into gaps and opportunities to improve antibiotic formulation, especially in pediatrics. The use of antibiotic prophylaxis can increase the transmission of multi-drug resistant organisms within the community. Finally, research on infection prevention and control and antibiotic resistance is essential to improve the treatment protocols and reduce the impact and spread of resistance

Antibiotic resistance is rising to high levels across the world, threatening ability to treat infectious diseases. We discuss how research on infection prevention and control and antibiotic resistance can help improve the treatment protocols while reducing the spread of resistance.