

23389 | Poultry and Beyond: Progress and Challenges in Combating Antibiotic Resistance

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Background & Aim: Poultry meat is the most widely consumed animal protein, owing to its cost-effectiveness and nutritional benefits. However, intensive poultry farming has contributed to antimicrobial resistance (AMR), driven by antibiotic (AB) use for growth promotion and disease prevention (1). In response, the European Union (EU) banned growth promoters in 2006 and introduced further legislation on routine AB use in 2019 (2,3), supported by international and national efforts like the FAO Action Plan and Portugal's National Action Plan. This study evaluates the impact of EU regulations and national initiatives on AB use in food-producing animals, focusing on poultry, and highlights the ongoing challenges of AMR. **Methods:** A search was performed in databases such as PUBMED and Google Scholar (up to March 2025), alongside health/food organisations (FAO, WHO, ECDC and EFSA) and EU legislation, using keywords such as "AMR" and "Poultry". The inclusion criteria included safety reports, systematic reviews, and surveillance data. **Results:** Between 2014-2021, AB use in food-producing animals, including poultry, declined by 45% across the EU, with Portugal showing similar trends, reflecting the impact of legislation (4,5). Temporal trend analyses show encouraging progress in reducing AMR in food-producing animals across several EU countries over the past decade (6). In Portugal and other countries, the use of critical AB like colistin in poultry declined significantly, driven also by voluntary bans (7). Globally, despite regulatory measures and growing awareness, AMR remains an issue, exacerbated by cross-border trade, inconsistent enforcement, and the spread of resistant bacteria. **Conclusions:** EU regulations and national initiatives have significantly reduced AB use. However, effectively tackling AMR requires stricter enforcement (responsible AB use, improved infection prevention and control), alternative growth strategies, and stronger international collaboration within a One-Health approach.

Keywords: Poultry, Antibiotic resistance, One Health, Food Safety.

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