

E0030 The Global Point Prevalence Survey of Antimicrobial Consumption and Resistance (Global-PPS) in 2015 and 2017: variation of colistin prescribing

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Background: The Global-PPS (www.global-pps.com) assesses antimicrobial prescribing worldwide using a standardized and validated method. Colistin re-emerges as one of the last treatment options for infections caused by multidrug-resistant Gram-negative pathogens. We aimed to analyse variation of colistin prescribing and dosing worldwide.

Materials/methods: We analysed 2015 and 2017 Global-PPS data (53 countries/335 hospitals and 45 countries/273 hospitals, respectively) to analyse colistin prescribing in patients aged ≥ 15 years only.

Results: Overall worldwide proportion of surveyed patients treated with colistin was 0.69% in 2015 (239/34,762) and 0.83% in 2017 (205/24,655). Highest use was observed in West-Central Asia (1.59% in 2015; 2.52% in 2017 of all treated patients). Colistin was administered intravenously in 385 (0.65%) patients and for inhalation in 59 (0.10%) patients. Patients treated with colistin were mainly admitted to ICU (55.0%). Top 3 indications for colistin use were pneumonia (39.4%), sepsis (syndrome) (12.8%) and intra-abdominal sepsis (8.6%). 76.4% of patients were treated with colistin for a healthcare associated infection (HAI), among which 50.4% non-intervention related, 37.8% intervention related (e.g. VAP) and 11.8% to treat a surgical site infection. Overall targeted prescribing for colistin was 79.1% (351/444) and varied from 57.1% (n=12 patients) in North-Europe to 91.4% (n=96 patients) in West-Central Asia (100% in East-Europe and North-America, n=7 and 5 patients respectively). Targeted prescribing against carbapenem resistant organisms was 48.2% (214 patients). The mean parenteral daily dosing of colistin varied from 2.5MU in Africa (n=5, median=2MU) to 5.3MU in West-Europe (n=22, median=6MU) (figure). The mean inhaled daily dosing of colistin varied from 1.7MU in North-Europe (n=11, median=2) to 3.6MU in South-Europe (n=8, median=3MU). The number of administrations per day varied from every two days up to 4 times/day (2 times= 46.9%; 3 times= 38.5%; 1 time= 9.9%).

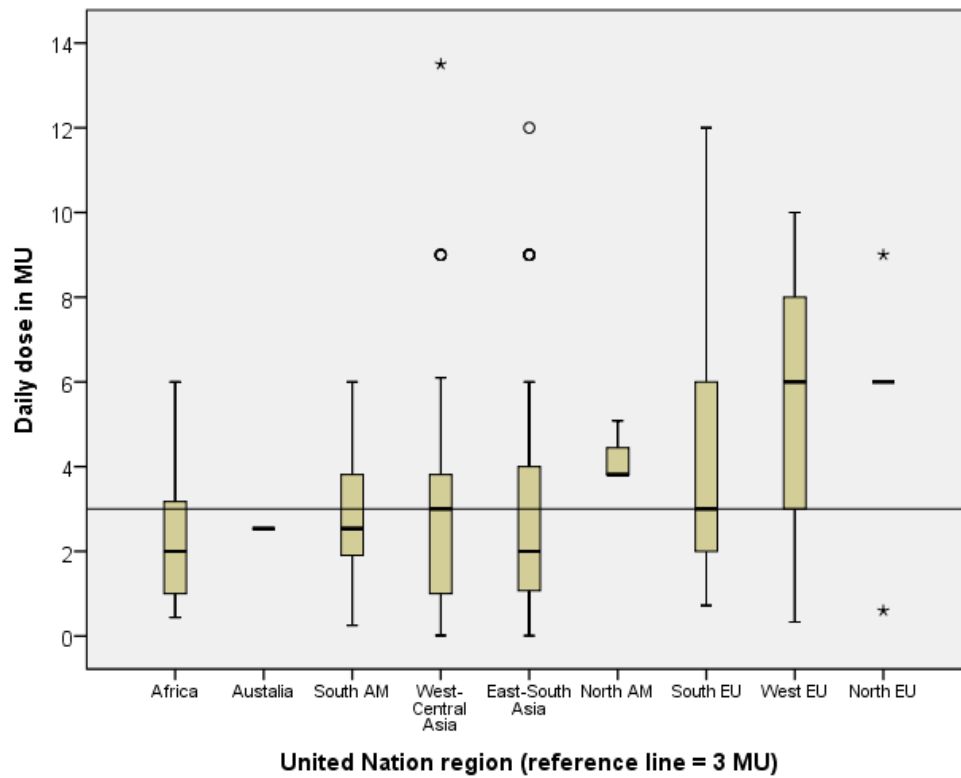


Figure: Variation in daily parenteral colistin dosing by region. Reference = WHO Defined Daily Dose expressed in Million International Units (MU).

Conclusions: Global use of systemic colistin increased in 2017 as compared to 2015 mainly affecting patients with HAI admitted to ICU. The big variation in colistin prescribing observed worldwide probably reflects the confusion about optimal dosing of colistin in critically ill patients.