Antibiotic consumption from 2013 to 2015 at Colombian hospitals of third level of complexity.

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**Background**

The quantity of antibiotic use in hospitals has been shown to correlate with antimicrobial resistance, resulting in increased morbidity, mortality, and cost of health care. 1-2 ABACIN (www.abacin.org) is a Colombian program to stimulate the rational use of antibiotics, created and sponsored by the Colombian Association of Infectious Diseases (ACIN) since 2013 to improve the antibiotic stewardship in Colombia.

**Objective:** Monitor consumption of antibiotics in hospitals of third level around the country.

**Methods**

Hospitals interested in the surveillance and control of antibiotic use were invited to participate. An electronic on-line tool for entering data of prescription of antibiotics was designed, according to the occupancy percentage, number of beds and number of antibiotics (blisters month per month) (www.abacin.org). For measure antibiotic consumption we used the ATC/DDD system, and the unit of measurement was Defined Daily dose /100 occupied bed-days (DDD/100 OBD) during the period 2013-2015.

**Results and Discussion**

11 institutions (5 from Bogotá D.C. and 6 from another cities) reported data. The general average of DDD/100 OBD of antibiotics consumption from all institutions was 78.5 for 2013, 50.6 for 2014 and 45.6 for 2015. The top 5 most prescribed were: Meropenem, Vancomycin, Cefepime, Ceftriaxone and Ciprofloxacin. The average DDD/100 OBD was 0.23 for Meropenem, 1.45 for Vancomycin, 2.37 for Cefepime, 1.47 for Ceftriaxone and 0.71 for Ciprofloxacin. Our findings describe an increase in expected value of some antibiotics such as Meropenem, Cefepime and Ceftriaxone in the period analyzed.

Our data showed antibiotic consumption in Colombian hospitals is similar or lower to previous data described around the world. 3-4 The trend to diminish could be explained by the presence of antimicrobials stewardships in theses hospitals. However Meropenem, Ceftriaxone and Cefepime presented an increase in the tendency of use (fig. 2.3 and 4).

**Figure 1.** Cefepime consumption expressed in (DDD/100 OBD) (2013-2015)

- The term is used whether the standard deviation is the universe or population parameter, or some estimate thereof, or simply a “standard value” for control chart purposes

**Figure 2.** Ceftriaxone consumption expressed in (DDD/100 OBD) (2013 – 2015)

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**Figure 3.** Meropenem consumption expressed in (DDD/100 OBD) (2013 – 2015)

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**Conclusions**

Our data findings provide baseline information on patterns of antibiotic consumption in Colombia and to correlate these findings with results of antibiotic susceptibility testing would provide insights and tools needed to support surveillance strategies and prudent use of antibiotics.

**References**


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