



# The Global Point Prevalence Survey of Antimicrobial Consumption and Resistance (Global-PPS): First results of antimicrobial prescribing in 12 Chilean Hospitals.

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## INTRODUCTION AND PURPOSE

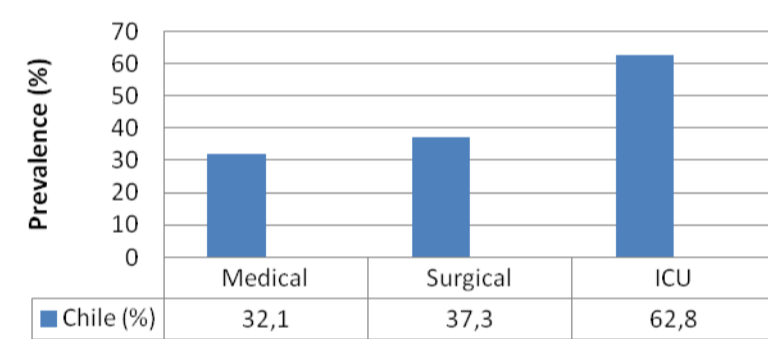
Information related to antimicrobial prescribing is critical for the implementation of antibiotic stewardship program. So far, there is no information of antibiotic prescribing in Chile. We applied a uniform and standardized method for surveillance of antimicrobial use (Global-PPS) in 12 Chilean hospitals. The aim of this study was to assess variation of antimicrobial prescribing in 12 Chilean hospitals.

## METHODS

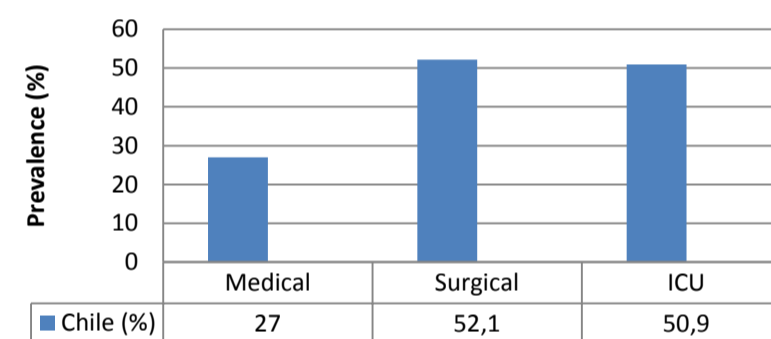
PPS was conducted from March through May 2015, in 12 Chilean tertiary care hospitals. The survey included all inpatients receiving an antimicrobial (AM) on the day of PPS. Data collected included age, gender, weight, antimicrobial agents, doses, reasons and indications for treatment, microbiological data, and quality indicators. Denominators included the total number of inpatients. A web-based application is used for data entry, validation and reporting as designed by the University of Antwerp ([www.global-pps.com](http://www.global-pps.com)).

## RESULTS

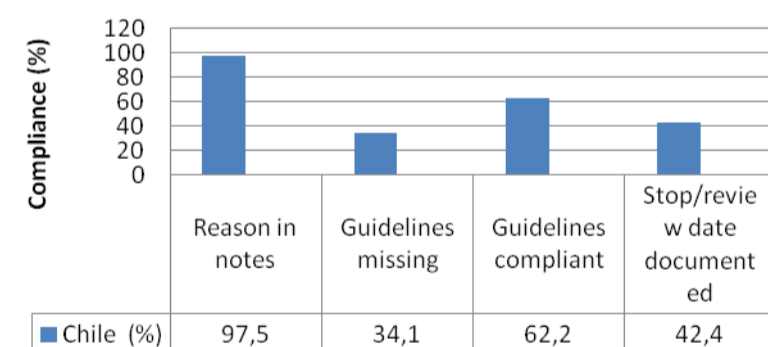
Antimicrobial prevalence by activity: Adults



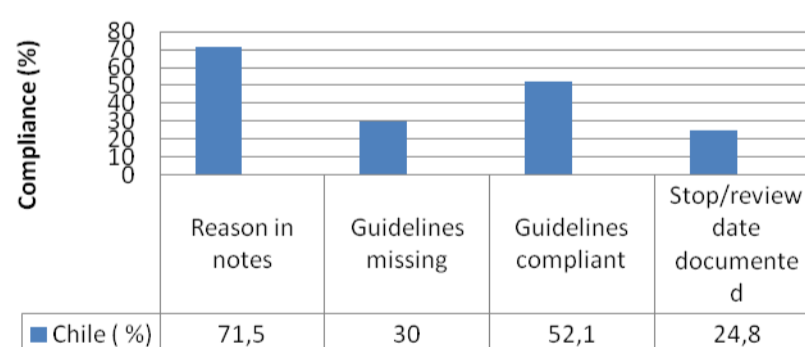
Antimicrobial prevalence by activity: Children



Quality indicators for antimicrobial use: medical



Quality indicators for antimicrobial use: surgical

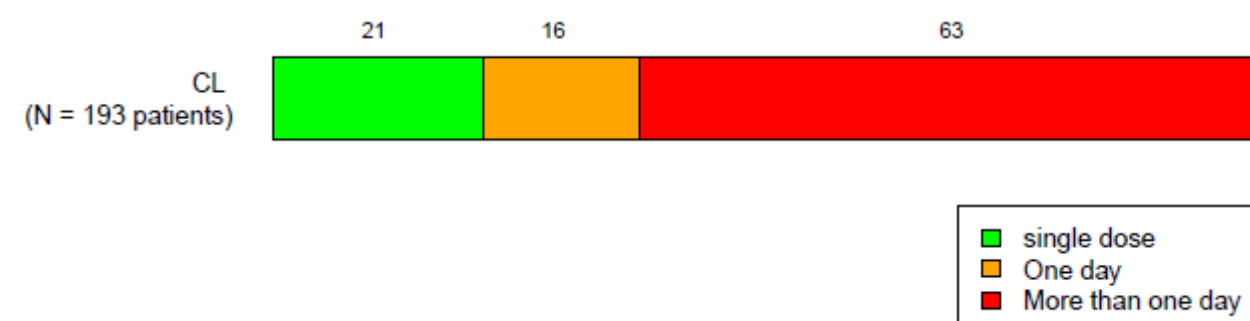


The PPS included 3043 patients of which 2504 admitted in adult wards, 304 in paediatric wards, and 235 in neonatal wards. Overall AM prescribing was 35.9%. Overall AM use was highest in children (37.5%), followed by adults (36.9%) and neonates (23.0%). In adult wards the prevalence of AM use ranged from 31.9% in medical wards to 62.8% in ICU. Compared with Europe, Chilean hospitals used more non penicillin beta-lactam antibiotics (39% vs 29%), more 3<sup>rd</sup> generation cephalosporins (47% v/s 40%) and carbapenems in intensive care units (40% vs 28%). The top 5 antibiotics (ATC code J01) prescribed in Chile were ceftriaxone (18.2%) mainly prescribed for community acquired pneumonia and intrabdominal infections, metronidazole (10.8%) mainly in combination with ceftriaxone (61.0% of cases), cefazolin (8.7%) mainly for prophylactic use, vancomycin (8.2%) mainly prescribed for a nosocomial pneumonia; and ciprofloxacin (4.8%), mainly for treatment or prophylaxis of urinary tract infections (39.0%).

Reason for AM prescribing was documented in clinical charts in 90% in medical wards, 70% in surgical wards and 90% in the ICU. A stop review date was written in the notes in 38% of all antibiotic prescriptions (range: 3.6%-74.1%). Overall, guidelines were missing in 28.7% (range: 0% to 95%). Compliance with guidelines was lowest in intensive care units (54%). Prolonged prophylaxis prescribing (> 24 hours) was very common (63.4%, range 33.3% to 85.1%).

In community acquired infections 25% of antibiotic treatments were targeted, while in hospital acquired infections were 43%. Out of all targeted treatments 17% of the patients got an antibiotic prescribed against a multi drug resistant microorganism (MDRO) which is more than twice as high compared to Europe (6.8%). The presence of an extended spectrum beta-lactamase (ESBL) was the most common cause (7%) in Chile.

## Duration of surgical prophylaxis in adults and children.



## CONCLUSION

This Global-PPS for the first time evaluated antimicrobial prescribing in Chilean hospitals. AM rates are high but vary a lot among hospitals. Treatment directed to MDRO is frequent. We disclosed following areas to improve antibiotic prescribing: absence of and compliance with guidelines, low reporting of a stop/review date in the medical files and prolonged surgical prophylaxis.