Infection Resistance: Quantity and Quality of Antimicrobial Prescribing for Inpatients with

The ratio of DID to DOTID could be useful as an indicator for reflecting the extent of the DOTID as a tool and benchmark to assess the AMU, especially in children, and DOTID in elderly was comparable with that in productive age, suggesting that daily by DID could be underestimated, especially in children. The gap between DID and DOTID in children was much larger than that of other age groups regardless of dosage form, suggesting that AMU assessed in elderly, respectively. The total DID/DOTID (oral, parenteral) in three age groups in 2016 were 16.31, 0.27 in the children, 12.82, 0.39 in productive age, and 15.91, 2.13 was shown in the following table. The total DID (oral, parenteral) in three age groups assessed by defined daily doses per 1,000 inhabitants per day (DID) as a measure

Methods. The DID value was calculated by the same method in our previous study. The DOT values was extracted from data in NDB and were standardized by a

Results. The total DID (oral, parenteral) from 2013 to 2016 in three age groups was shown in the following table. The total DID (oral, parenteral) in three age groups in 2016 were 16.31, 0.27 in the children, 12.82, 0.39 in productive age, and 15.91, 2.13 in elderly, respectively. Similarly, the total DID (oral, parenteral) in three age groups in 2016 were 36.15, 1.20 in the children, 16.48, 0.80 in productive age, and 23.52, 3.62 in elderly, respectively. The total DID/DOTID (oral, parenteral) in three age groups in 2016 were 0.45, 0.23 in the children, 0.7, 0.49 in productive age, and 0.68, 0.59 in elderly, respectively. The gap between DID and DOTID in children was much larger than that of other age groups regardless of dosage form, suggesting that AMU assessed by DID could be underestimated, especially in children. The gap between DID and DOTID in children was comparable with that in productive age, suggesting that daily dosage in the elderly is similar to that in productive age.

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2017. Age-specific Distribution of Antimicrobial Days of Therapy (DID) Using National Database of Health Insurance Claims and Specific Health Checkups of Japan (NDB Japan): Comparison with Defined Daily Doses per 1,000 Inhabitants Per Day (DID)

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Session: 236. Antibiotic Stewardship: Global
Saturday, October 5, 2019: 12:15 PM

Background. Nationwide surveillance of antimicrobial use (AMU) is often assessed by defined daily doses per 1,000 inhabitants per day (DID) as a measure for reflecting the extent of AMU using National Database of Health Insurance Claims and Specific Health Checkups of Japan (NDB Japan), which archives e-claim big data (Infection. 2018 46:207–214). The estimated AMU assessed by DID could be underestimated in patients with diminished renal function and in pediatric patients. Our objective was to analyze days of therapy (DOT) using NDB and to evaluate its utility by comparing with DID.

Methods. The DID value was calculated by the same method in our previous study. The DOT values was extracted from data in NDB and were standardized by a

Results. The total DID (oral, parenteral) from 2013 to 2016 in three age groups was shown in the following table. The total DID (oral, parenteral) in three age groups in 2016 were 16.31, 0.27 in the children, 12.82, 0.39 in productive age, and 15.91, 2.13 in elderly, respectively. Similarly, the total DID (oral, parenteral) in three age groups in 2016 were 36.15, 1.20 in the children, 16.48, 0.80 in productive age, and 23.52, 3.62 in elderly, respectively. The total DID/DOTID (oral, parenteral) in three age groups in 2016 were 0.45, 0.23 in the children, 0.7, 0.49 in productive age, and 0.68, 0.59 in elderly, respectively. The gap between DID and DOTID in children was much larger than that of other age groups regardless of dosage form, suggesting that AMU assessed by DID could be underestimated, especially in children. The gap between DID and DOTID in elderly was comparable with that in productive age, suggesting that daily dosage in the elderly is similar to that in productive age.

Disclosures. All authors: No reported disclosures.

2018. The Global Point Prevalence Survey of Antimicrobial Consumption and Resistance: Quantity and Quality of Antimicrobial Prescribing for Inpatients with Pneumonia in the Philippines

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Session: 236. Antibiotic Stewardship: Global
Saturday, October 5, 2019: 12:15 PM

Background. Pneumonia is the most common indication for prescription of antibiotics in hospitals in the Philippines. We describe the quality and quantity of antimicrobial prescribing for hospitalized pneumonia patients in the Philippines in 2018 (www.global-PPS.com).

Methods. A point prevalence survey was performed from September to December 2018 in 28 public and private hospitals in Luzon, Mindanao, and Visayas regions. Ward- and patient-level data were collected using a standardized methodology and entered through a web-based application. We analyzed all antibiotic (ATC J01) prescriptions for inpatients with pneumonia.

Results. Of all hospitalized patients, 16.2% (n = 1516) received one or more antibiotic (J01) for treatment of pneumonia, majority (78.3%) of which were for community-acquired pneumonia (CAP). In adults, the most commonly used antibiotics were amoxicillin (19.5%), ceftriaxone (19.0%), and piperacillin/enzyme inhibitor (13.2%) for CAP and meropepion (19.8%), piperacillin/enzyme inhibitor (18.9%), and levoflaxacin (8.6%) for healthcare-associated pneumonia (HAP). In neonates and children, cefuroxime was used most often (20.1%) for treatment of CAP followed by amoxicillin (16.7%) and amikacin (15.3%). Children and neonates with HAP were most commonly treated with amikacin (18.7%), meropenem (15.7%), and ampicillin (10.4%). Overall, 16.0% of all antibiotic prescriptions for pneumonia were based on microbiology results, 3.1% for CAP and 33.9% for HAP. Microbiology-based prescriptions were most commonly targeted at ESBL-producing Enterobacteriaceae (8.4%). Further analysis of quality indicators showed that up to 80.0% of all prescriptions for pneumonia were compliant to local guidelines and reason in notes was documented for 70.9% of prescriptions. However, no recorded stop or review date of antibiotic treatment for pneumonia was less documented (27.8%).

Conclusion. Global-PPS data provided valuable insights into the quantity and quality of antibiotic prescribing for pneumonia inpatients. These results will be fed back to the Department of Health, medical societies, and hospitals for prioritization of targets and policies toward the improvement of the Philippine antimicrobial stewardship program.

Disclosures. All authors: No reported disclosures.

2019. Multicentric Antimicrobial Point Prevalence Survey in Four Tertiary Care Hospitals in Southern India

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Session: 236. Antibiotic Stewardship: Global
Saturday, October 5, 2019: 12:15 PM

Background. Antibiotic consumption data are scarce in the subcontinent. Defined Daily Doses (Doses) and Days of Therapy (DID)-based metrics both have inherent disadvantages limiting their application in resource-limited settings primarily in terms of resource hours. Point Prevalence Study (PPS) offers an offer an

Results. The total number of patients surveyed was 944.42.7% patients had a cross-sectional hospital-based PPS was conducted in 4 tertiary care hospitals in Southern India. The study reveals antibiotic use in almost 40% of patients under a

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Saturday, October 5, 2019: 12:15 PM

Background. Antibiotic consumption data are scarce in the subcontinent. Defined Daily Doses (Doses) and Days of Therapy (DID)-based metrics both have inherent disadvantages limiting their application in resource-limited settings primarily in terms of resource hours. Point Prevalence Study (PPS) offers an offer an

Results. The total number of patients surveyed was 944.42.7% patients had a cross-sectional hospital-based PPS was conducted in 4 tertiary care hospitals—Astor Medcity (Kochi, Kerala), Astor MIMS (Calicut, Kerala), Astor Ramesh (Guntur, Andhra Pradesh), and Astor CMI (Bengaluru, Karnataka)—based on a standardized format derived from the GLOBAL-PPS initiative and WHO resources.

Conclusion. The study reveals antibiotic use in average 40% of patients under a survey with a DID of 82.59 per 1000 patient-day. Improving empirical use of antimicrobials, BL/BLI focused intervention and improved documentation has been identified as potential areas for intervention based on this study. The study also highlights the scope of PPS as an effective tool in resource-limiting setting to define and refine antimicrobial use and contributing to antimicrobial stewardship as well as other activities aimed reducing antimicrobial resistance across a range of settings.
2021. Comparison of Patterns of National Oral Antibiotic Use Between All Dentists and Medical Doctors in Japan in 2016 Using the National Database of Health Insurance Claims and Specific Health Checkups of Japan (NDB)

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**Session:** 236. Antibiotic Stewardship: Global Saturday, October 5, 2019: 12:15 PM

**Background.** Antibiotic resistance (AMR) is a global threat for both dentists and medical doctors. The Japanese national action plan on AMR targets a 50% reduction in the use of oral broad-spectrum antimicrobials by 2020 compared with its use in 2013. However, no study has compared the pattern of oral antimicrobial use (AMU) in outpatient settings between all dentists and medical doctors in Japan using the national database of health insurance claims and specific health checkups (NDB).

**Methods.** Data of oral AMU in outpatient settings prescribed by both all dentists (n = 104,533) and medical doctors (n = 319,480) in Japan in 2016 were evaluated using NDB collected by the Ministry of Health, Labor and Welfare of Japan; the data accounted for 98% of the total claim data in Japan. Antimicrobials were classified by the World Health Organization (WHO) defined Anatomical Therapeutic Chemicals Classification. WHO measures the number of AMU using defined daily dose per 1,000 inhabitant-days (DIDs).

The pattern of oral AMU between all dentists and medical doctors in Japan in 2016 was compared.

**Results.** The values of oral AMU in outpatient settings among all dentists (n = 104,533) and medical doctors (n = 319,480) in Japan were 1.20 and 12.11, respectively. The proportions of AMU among dentists were cephalosporins, 65.1%; macrolides, 18.9%; quinolones, 5.5%; and penicillin, 8.7%. In contrast, the proportions of AMU among medical doctors were cephalosporins, 23.1%; macrolides, 36.9%; quinolones, 18.9%; and penicillin, 8.7%. There were differences in the pattern of oral AMU between dentists and medical doctors (P < 0.001) (Table 1).

**Conclusion.** Although the value of total oral AMU among dentists was 9.9% of medical doctors, the proportion of cephalosporin use, which was thought to be inappropriate prescribing, was higher among dentists than among medical doctors. Further studies that are adjusted to patients’ characteristics are needed.

**Table 1. Comparison of oral antimicrobial use between all dentists and medical doctors in Japan**

| AMU Class       | Dentists (n=104,533) | Medical doctors (n=319,480) |
|-----------------|----------------------|-----------------------------|
| Total           | 1.20                 | 12.11                       |
| Cephalosporins  | 0.79 (65.1)          | 2.80 (23.1)                 |
| Macrolides      | 0.23 (18.9)          | 4.47 (36.9)                 |
| Quinolones      | 0.07 (5.5)           | 2.69 (22.2)                 |
| Penicillin      | 0.11 (8.7)           | 0.98 (8.1)                  |
| Others          | 0.02 (1.8)           | 1.17 (9.6)                  |

Data show defined daily doses per 1000 inhabitants per day, DID (%).

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