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Global Point Prevalence Survey of Antimicrobial Consumption and Resistance (Global-PPS):

2015, 2017, 2018 Results of global antimicrobial prescribing for paediatric community-acquired and healthcare-associated pneumonia

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Speaker Disclosure

	No, nothing to disclose
	Yes, please specify:

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Background

- Antimicrobials are commonly prescribed drugs in paediatrics and neonates.
- Their widespread overuse contributes to significant antimicrobial resistance.
- Understanding prescribing practices is paramount in antimicrobial stewardship.

Objectives

- This study provides global estimates of antimicrobial use for paediatric community-acquired pneumonia (CAP) and healthcare-associated pneumonia (HAP) by United Nations (UN) regional group.

Study design

- A standardized method for surveillance of antimicrobial use in hospitals was used to assess variations in antimicrobial prescribing globally.

- PPSs were conducted in 2015, 2017, 2018 in 711 unique hospitals of 73 countries worldwide.

Study design

- The survey included all inpatients receiving antimicrobials on the day of the PPS.

- A web-based application was used for data-entry, validation and reporting designed by the University of Antwerp (www.global-pps.com). BioMérieux provided unrestricted funding support for the survey.

Results

- 35199 paediatric and neonatal patients were admitted of which 14723 (41.8%) were treated with at least one antimicrobial agent.

- 3133 (8.9%) patients were treated for pneumonia (80.7% CAP, 19.3% HAP) (table 1).

Results: Global antimicrobial use for CAP and HAP

	Total patients	Number on antimicrobials	Number of CAP patients	Number of HAP patients	% patients receiving antimicrobials for CAP	% patients receiving antimicrobials for HAP
Africa	3860	2535	296	86	11.7	3.4
East & South Asia	7396	4035	1062	211	26.3	5.2
East Europe	2000	504	45	52	8.9	10.3
North America	2607	727	74	33	10.2	4.5
North Europe	2770	1019	140	22	13.7	2.2
South America	3320	1185	192	81	16.2	6.8
South Europe	3947	1670	234	59	14.0	3.5
West & Central Asia	3725	1615	291	30	18.0	1.9
West Europe	5306	1357	189	32	13.9	2.4
Total	35199	14723	2527	606	17.2	4.1

Results: 10 most commonly prescribed antimicrobials for CAP and HAP. Data shown as proportional use of antimicrobials for CAP and HAP.

Antimicrobial	CAP (%)		Antimicrobial	HAP (%)
Ceftriaxone	17.1		Meropenem	13.8
Ampicillin	11.0		Amikacin	11.0
Amikacin	7.8		Vancomycin	9.7
Cefuroxime	7.2		Piperacillin and enzyme inhibitor	9.3
Cefotaxime	7.2		Ampicillin	5.5
Amoxicillin	5.0		Cefotaxime	4.6
Gentamicin	5.0		Ceftazidime	4.6
Azithromycin	4.6		Ceftriaxone	3.9
Ampicillin and enzyme inhibitor	4.0		Gentamicin	3.9
Meropenem	3.1		Ciprofloxacin	3.6

Predicted Outcomes

- 1. Understanding global antimicrobial use
- 2. Opportunities exist to improve management strategies
- 3. Evidence for guidelines

Conclusions

- There is wide variation in the proportion of children receiving antimicrobials for CAP and HAP across UN regions with the highest CAP in East and South Asia and the highest HAP in East Europe.

- Work is needed to reduce the incidence of HAP across the globe

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