Healthcare-Associated Infections - Results of the 2017 and 2018 Global Point Prevalence Survey of Antimicrobial Consumption and Resistance

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For the Global-PPS network

ICPIC2019
INTERNATIONAL CONFERENCE ON PREVENTION & INFECTION CONTROL
Geneva, Switzerland
10-13 September 2019

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DISCLOSURES

bioMérieux is the sole private sponsor of the Global Point Prevalence Survey. The Global-PPS is also funded by a personal Methusalem grant to Herman Goossens of the Flemish government.
The funder has NO role in study design, data collection, data analysis, data interpretation, or writing the report.
Data are strictly confidential and stored anonymously at the coordinating centre of the University of Antwerp.”

Global-PPS surveillance tool in a nutshell

- Based on ESAC-PPS
- Since 2015 : Any hospital admitting inpatients is welcome to participate
- On a voluntary basis
- Implementing a uniform standardized methodology
- Offers a simple web-based tool : quality assurance, data validation process and feedback reporting
- Hospital build up own database, they remain owner of own data
- Since 2018 three survey periods/year

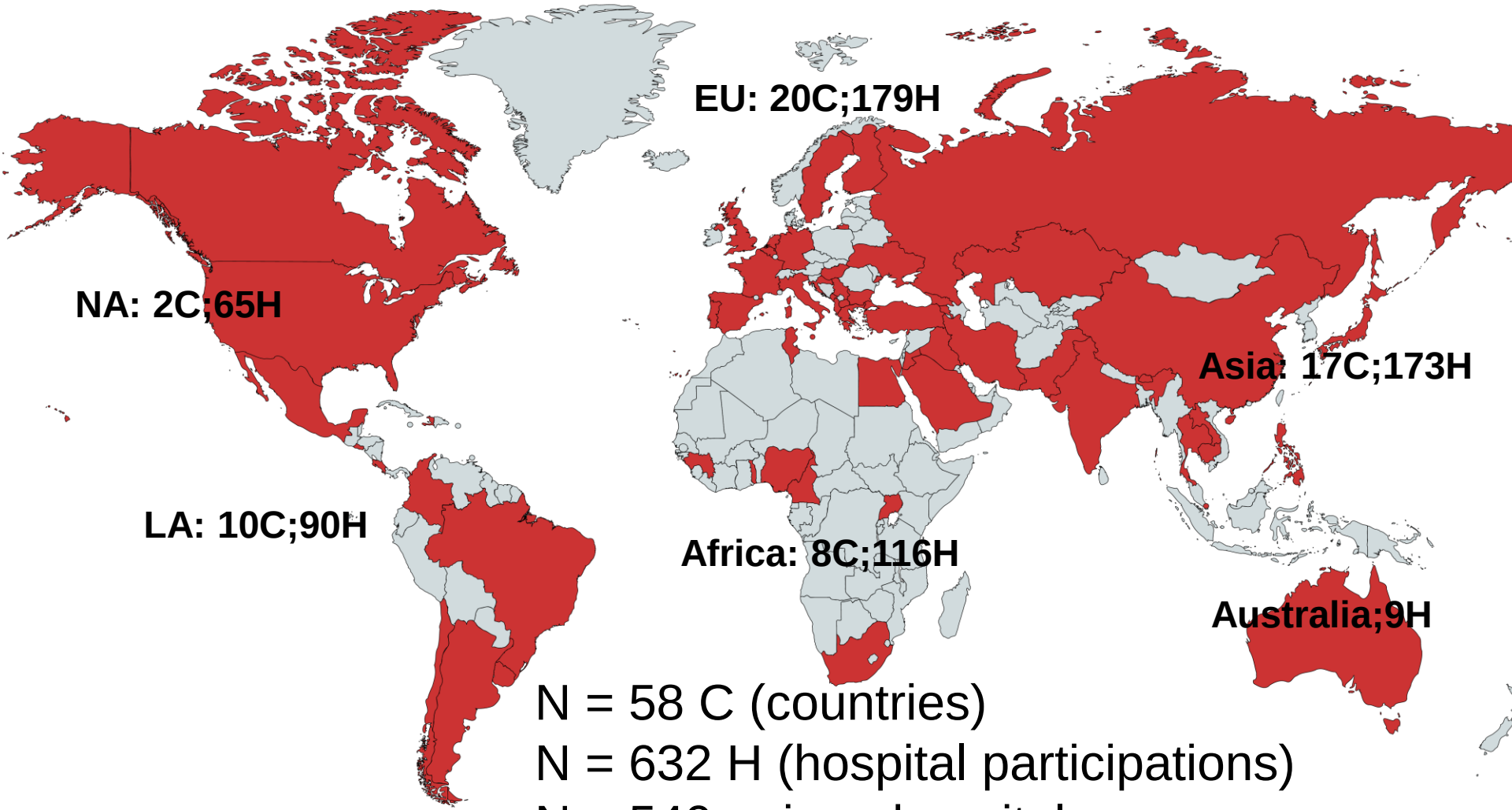
Global-PPS purpose

- Monitor rates of antimicrobial prescribing in hospitalized adults, children and neonates.
- Determine the variation in drug, dose and indications of antimicrobial prescribing across continents.
- Identify targets to **improve quality of antimicrobial prescribing**
- Identify targets to **prevent Health-care Associated Infections** (HAI)
- Help **designing stewardship interventions** to promote prudent antimicrobial use and improve patient health
- Assess effectiveness of interventions through repeated PPS

Global-PPS method in a nutshell

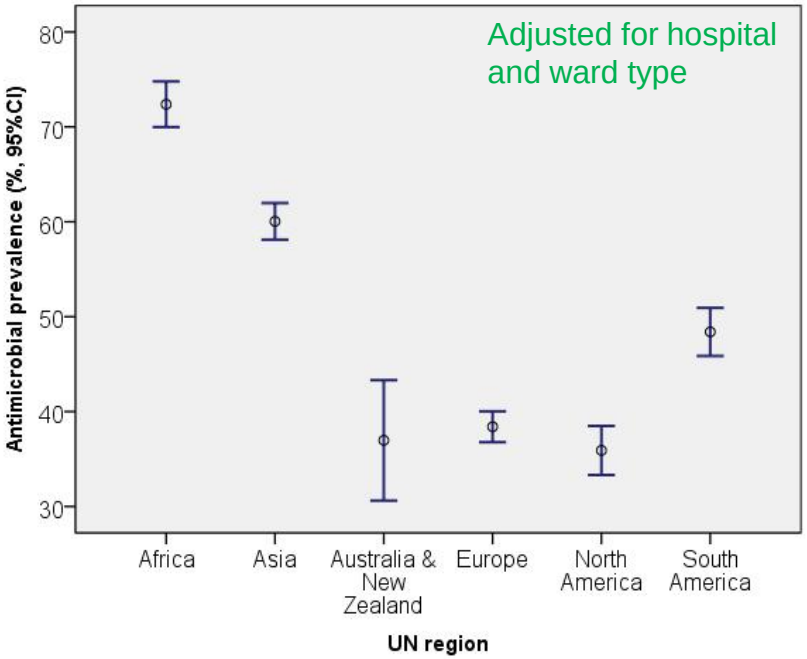
- Point-Prevalence “snapshot at a particular time”
- All wards of the hospital are included “once”
- Denominator collected at ward level
  - ✓ N patients admitted
  - ✓ N available beds
- Numerator data collected for those patients on at least one antimicrobial
  - ✓ Patient data (age, sex, gender, weight)
  - ✓ Antimicrobial prescription data (agent, dose, diagnosis, indication, set of quality indicators)
  - ✓ Microbiology data (targeted versus empiric use, AMR data)
- Data collection on paper forms
- Web-based data entry, verification, validation and reporting with the help of the Global-PPS tool
- See protocol available at www.global-pps.com/documents/ (several languages)

Degree of participation in 2017-2018



N = 58 C (countries)
N = 632 H (hospital participations)
N = 540 unique hospitals

Antimicrobial prevalence (%) worldwide

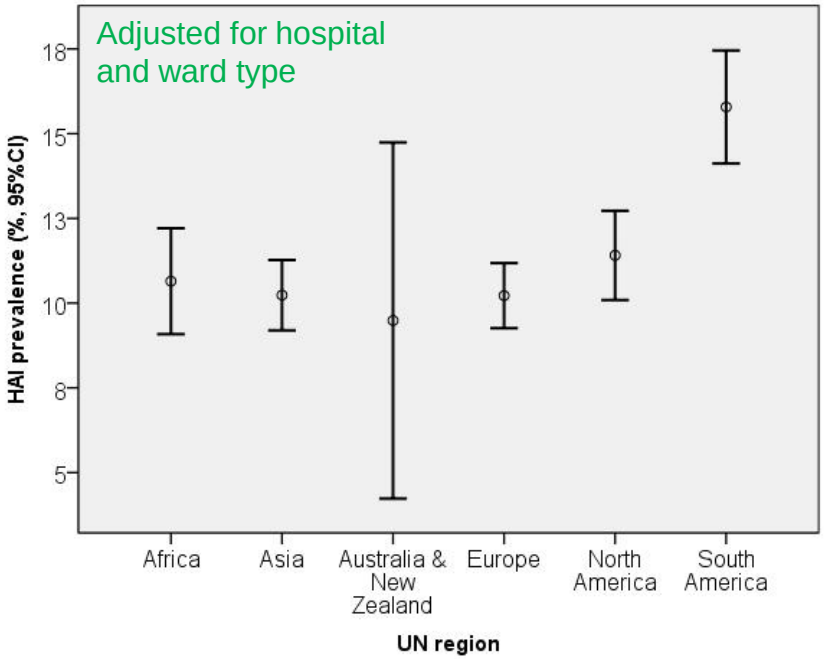


Average of AMU% Crude prevalence

region	Mean	N	Std. Deviation
Africa	71,478	115	19,3634
Asia	57,159	163	21,6869
Australia & New Zealand	33,045	9	10,4090
Europe	31,580	175	12,6879
North America	32,313	65	9,1142
South America	49,637	84	15,6419
Total	48,496	611	22,7520

2011-2012 ECDC-PPS : Mean AMU prevalence
Europe = 35.0% (country range: 21.4-54.7%)

HAI prevalence (%) worldwide

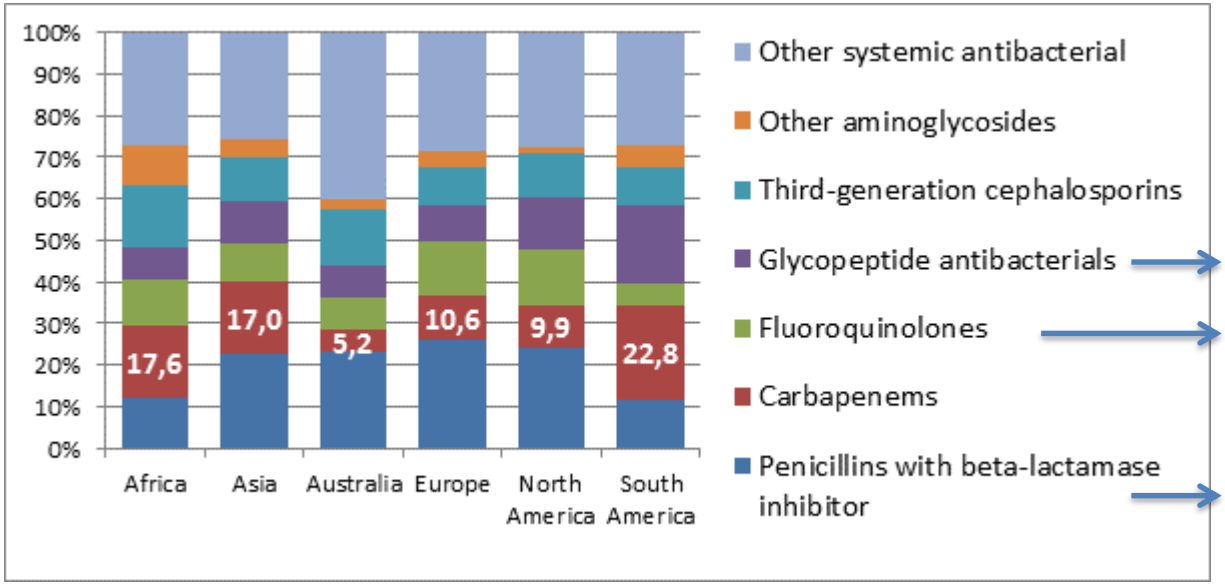


Average of HAI% Crude prevalence

region	Mean	N	Std. Deviation
Africa	8,027	115	11,5741
Asia	7,143	163	6,1015
Australia & New Zealand	8,989	9	6,7190
Europe	7,331	175	5,6518
North America	10,324	65	4,1403
South America	15,513	84	11,0272
Total	8,879	611	8,4191

2011-2012 ECDC-PPS : Mean HAI prevalence
Europe = 6.0% (95% CI: 5.7-6.3%)

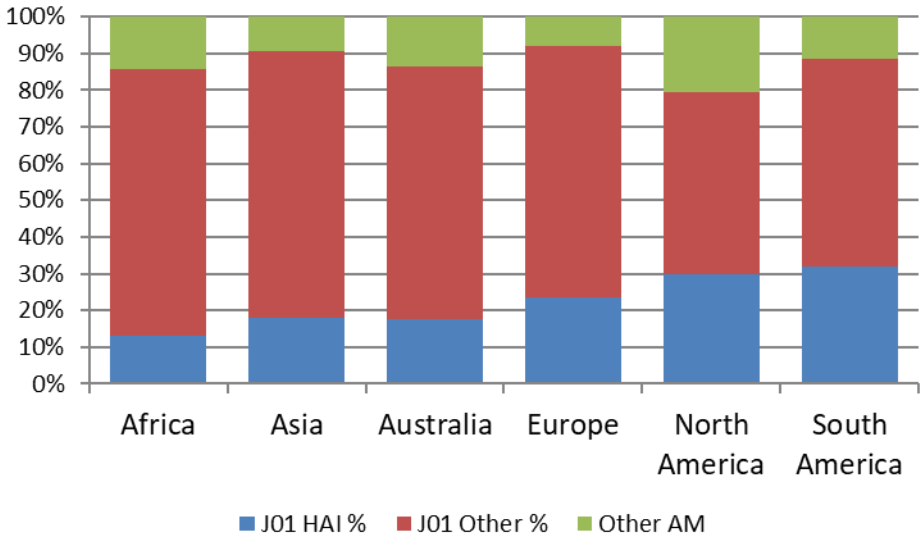
Which systemic antibacterials (ATC J01) are used for a HAI worldwide



Mainly vancomycin (91%)

Mainly ciprofloxacin (56.3%)

Mainly piptazo (65.2%)

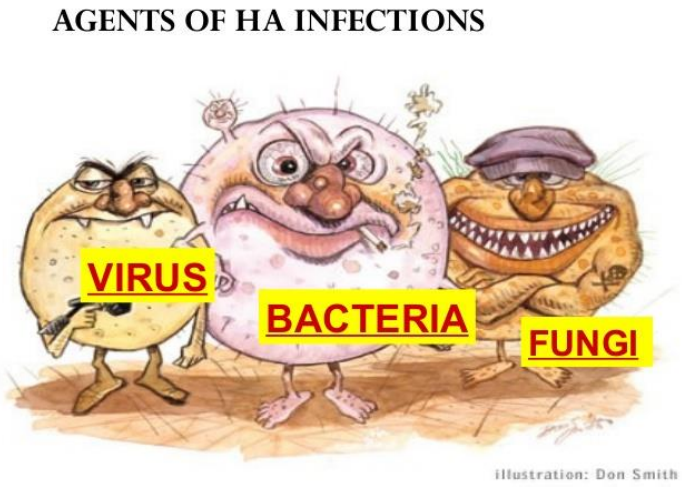


Antibiotic quality indicators for HAI by region

	Reason in notes	Stop/review date in notes	Guidelines missing	Prescribed according to guidelines	Targeted treatment	Targeted treatment PNEU	Targeted treatment UTI
Africa	65.4%	20.4%	33.4%	77.2%	19.3%	22.7%	44.9%
Asia	84.0%	42.2%	14.8%	83.8%	32.7%	26.5%	47.2%
Australia	68.9%	23.6%	16.2%	79.8%	/	/	/
Europe	84.7%	40.4%	13.0%	81.6%	40.0%	34.5%	52.2%
North AM	94.7%	56.8%	20.1%	83.3%	41.4%	23.2%	64.8%
South AM	91.9%	74.4%	13.9%	79.0%	36.9%	31.2%	63.6%
TOTAL	**85.1%**	**42.2%**	**15.9%**	**81.8%**	**35.0%**	**28.3%**	**54.5%**

Discussion

- High HAI prevalence rates (South AM)
- High broad spectrum prescribing for HAI
  - carbapenems (South AM, Africa, Asia)
- Need for invest in Latin America !
- Hospitals use this tool to enhance quality of antibiotic prescribing
  - Introduce simple antibiotic quality indicators as part of antibiotic stewardship programs
  - Develop local prescribing guidelines
  - Measure the impact of interventions through repeated PPS
  - Change practice (sustainability)

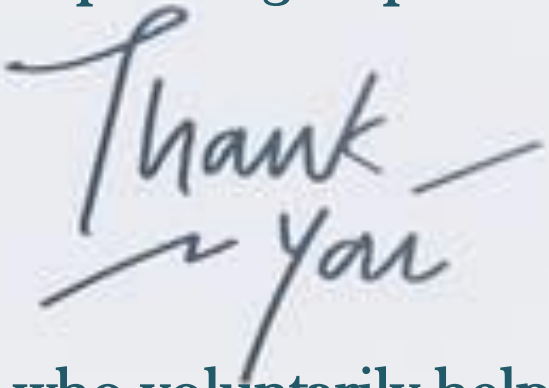


New optional HAI module as of September 2019

Enables to survey healthcare-associated infections in more detail, allow analyses of additional quality indicators.

- Main focus lies on the presence of invasive devices.

- Hundreds of healthcare professionals who voluntarily collect and submit data globally
- The Global-PPS development group



- People who voluntarily helped us with translation of protocol and data-collection templates
- Our sponsors and so many other people to thank

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