



GLOBAL POINT PREVALENCE SURVEY OF ANTIMICROBIAL CONSUMPTION AND RESISTANCE (GLOBAL-PPS)



**JOIN
GLOBAL
PPS**

Monitoring of quality indicators for antibiotic use in Belgian hospitals Are we improving?

Ann Versporten, for BAPCOC, the
Belgian antibiotic therapy policy
groups and the Global-PPS network

Contact:

Ann.Versporten@health.fgov.be

The Global-PPS is coordinated
by the University of Antwerp
and supported by bioMérieux

31st **ECCMID** EUROPEAN CONGRESS OF
CLINICAL MICROBIOLOGY
AND INFECTIOUS DISEASES

Online
9–12 July 2021

1,5-hour Oral Session, July 9
(10:45-12:15) 2021

 Universiteit
Antwerpen







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.”



Point Prevalence Surveys in Belgium

- Background : the 2014-2019 policy paper -


- 
2014-2019 policy paper of the Belgian Antibiotic Policy Coordination Committee (BAPCOC) defined hospital-based antibiotic quality indicators and target values. (<https://consultativebodies.health.belgium.be/en/Node/483>)
- 
Main objective of policy paper :
 - Consolidate the functioning of the antibiotic policy groups by law institutionalized in each Belgian hospital (ABTBG/GGA)
 - Improve the quality of antibiotic use by means of quality indicators

QUALITY INDICATORS HOSPITAL	TARGET	Measured by PPS
Choice of therapeutic antibiotics following local instructions	In at least 90% of the cases by 2019	Guideline compliance therapeutic antibiotics
Indication statement of antibiotic therapy in the medical record		Reason of antibiotic therapy written in notes
Choice of surgical antibiotic prophylaxis following local instructions		Guideline compliance antibiotics for SP
Duration of surgical antibiotic prophylaxis following local instructions		Proxy: SP > 1 day (also done through different audit on SP)



Point Prevalence Surveys in Belgium

- Aim and Methods -

 **Aim** of current study : Assess whether 90% compliance of the stewardship goals were achieved by 2019.

 **Methods :**

- Global point prevalence surveys (www.Global-PPS.com) were conducted in **2015, 2017 (ECDC-PPS included) and 2019**.
- All patients present in the wards on day of the PPS at 8 a.m. were included.
- Detailed data collected for patients on antimicrobials included AMU and HAI patterns and antibiotic quality indicators.
- Current analyses: patients admitted on neonatal wards were excluded.
- Prevalence rates on AMU and HAI were weighted by department type.



Degree of participation, AMU and HAI prevalence

	2015 ⁽¹⁾	2017 (including ECDC-PPS 2) ^(2,3)	2019 ⁽⁴⁾
N included hospital sites	100	110	76
N admitted patients	26,315	28,023	20,370
N patients with at least one AM prescription on the day of PPS	7212	7565	5452
Crude AMU prevalence (%; 95%CI)	26.7 (25.1-28.3)	26.9 (25.3-28.5)	27.9 (26.1-29.7)
Crude HAI prevalence (%; 95%CI)	7.8 (7.1-8.5)	7.3 (6.7-7.9)	7.1 (6.4-7.8)

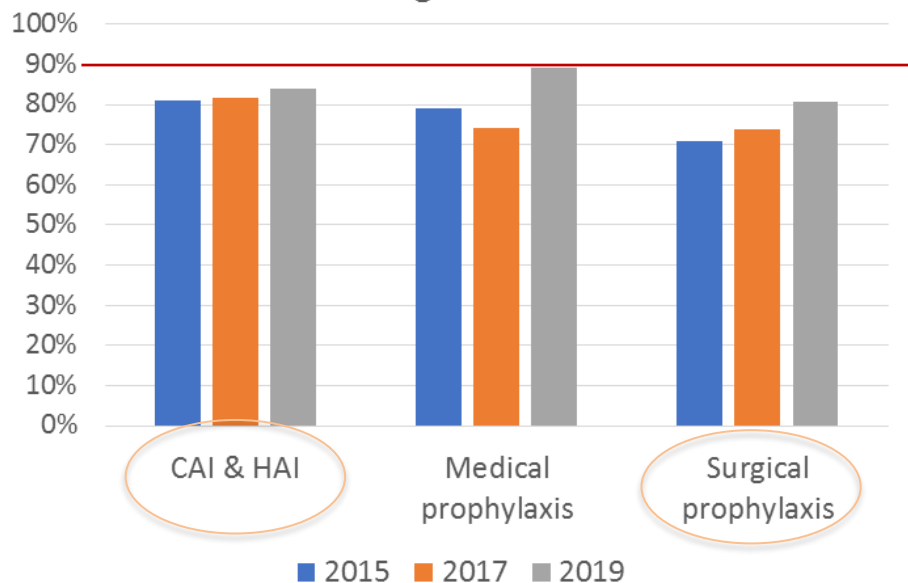
References:

- 1 Versporten A. et al. Lancet Glob Health. 2018;6(6):e619–29.
- 2 http://www.nsih.be/download/ECDC%20PPS/nationalreport_ECDCPPS2_017_Belgium_20181119.pdf
- 3 Vandael E. et al. Antimicrob Resist Infect Control. 2020;9:13.
- 4 Antimicrobial Consumption in Belgium. 10-year evolution (2010-2019) in the community, nursing homes and hospitals. http://www.nsih.be/download/GM/Sciensano_National%20report%20antimicrobial%20consumption%202010-2019_version%2020210329.pdf

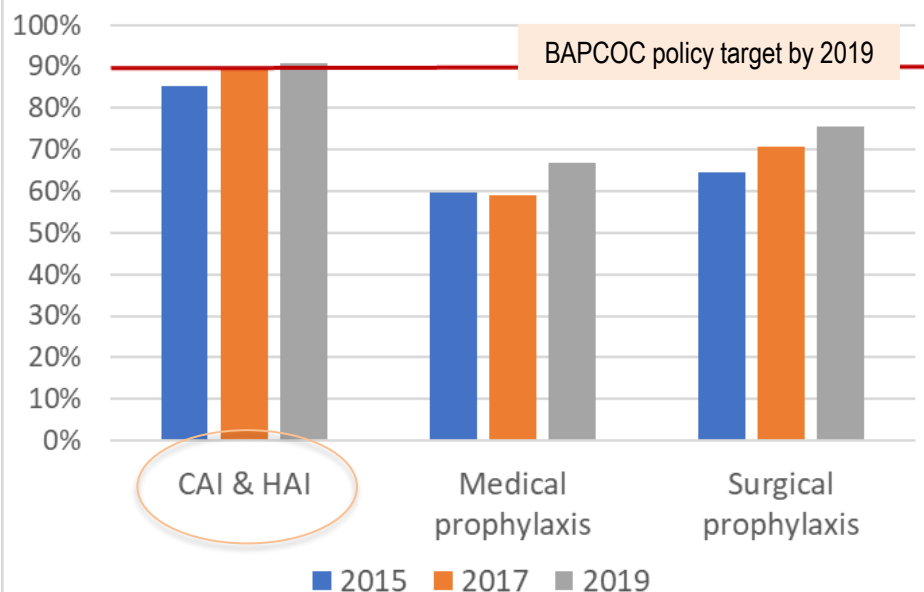


Antibiotic quality indicators

Choice of antibiotic prescribed according to local guidelines



Reason of antibiotic prescription written in notes



CAI & HAI = Community-acquired and Healthcare-associated infections = therapeutic use

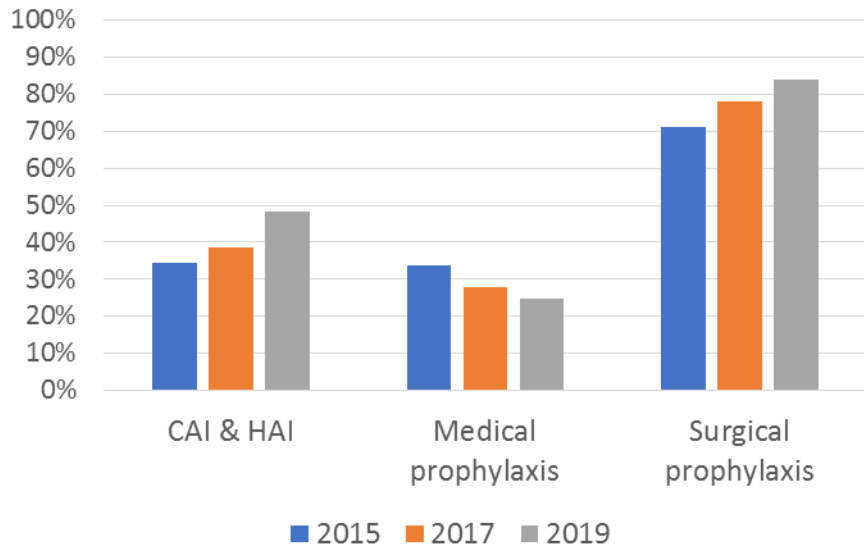
Selection on antibacterials for systemic use (ACT code J01)

Neonatal wards are excluded from these analyses

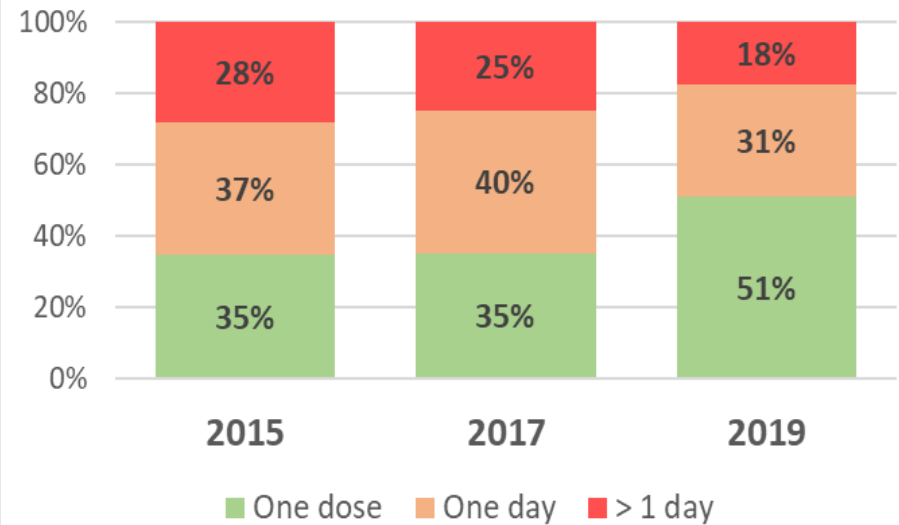
2017 ECDC-PPS data not available for guideline compliance and excluded for reason in notes

Antibiotic quality indicators

Stop or review date of antibiotic prescription is documented



Duration of antibiotics prescribed for surgical prophylaxis



CAI & HAI = Community-acquired and Healthcare-associated infections = therapeutic use

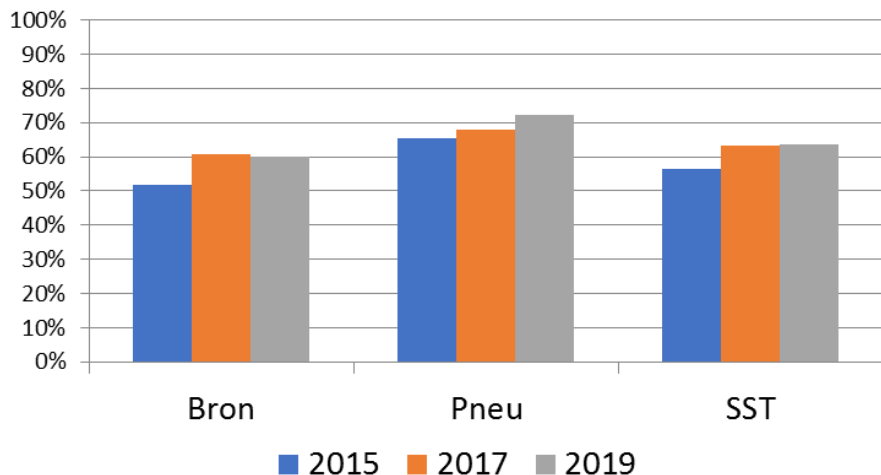
Selection on antibacterials for systemic use (ACT code J01)

Neonatal wards are excluded from these analyses

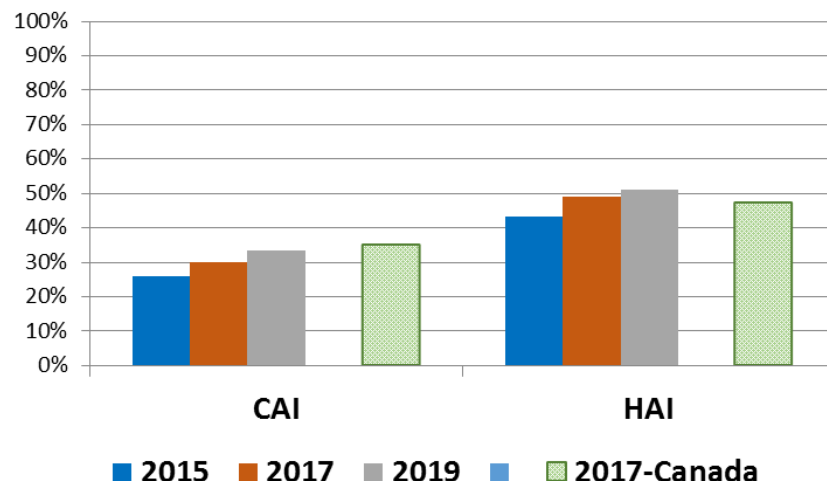
2017 ECDC-PPS data not available for stop/review date

Antibiotic quality indicators

Evolution of parenteral route of administration
Co-amoxiclav for 3 common indications



Therapeutic antibiotic prescribing based on a microbiological result



CAI & HAI = Community-acquired and Healthcare-associated infections = therapeutic use

Selection on antibacterials for systemic use (ACT code J01)

Neonatal wards are excluded from these analyses

2017 ECDC-PPS data not available for targeted prescribing

Bron = Bronchitis; Pneu = Pneumonia; SST = Skin & soft tissue infections

Frenette et al. The 2017 global point prevalence survey of antimicrobial consumption and resistance in Canadian hospitals, *Antimicrob. Resist. Infect. Control.* 2020; 9: 104, Canadian (14 hospitals).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7353732/>



Findings

- 📍 Satisfactory N hospital sites with motivated teams over time.
- 📍 AMU and HAI prevalence remained stable over time.
- 📍 All antibiotic quality indicators showed a steady slight improvement over time, but few reached the target compliance of 90% in 2019.
- 📍 Less than half of therapeutic antibiotic prescriptions had a "stop/review date documented in the medical record".
- 📍 Slight increase of targeted therapeutic antibiotic prescribing.

The way forward !

- 📍 Further investigation needed > examine what kind of stewardship interventions were put in place at hospital level which have led to the improvements observed
- 📍 Install a system to enhance the documentation of a stop/review date; preferably integrated in the hospital's electronic systems to enable information exchange with the hospital pharmacy
- 📍 The antibiotic policy groups at hospital level have the continued task of supervising and sensitizing physicians. Hospitals will be financially supported through the HOST project.