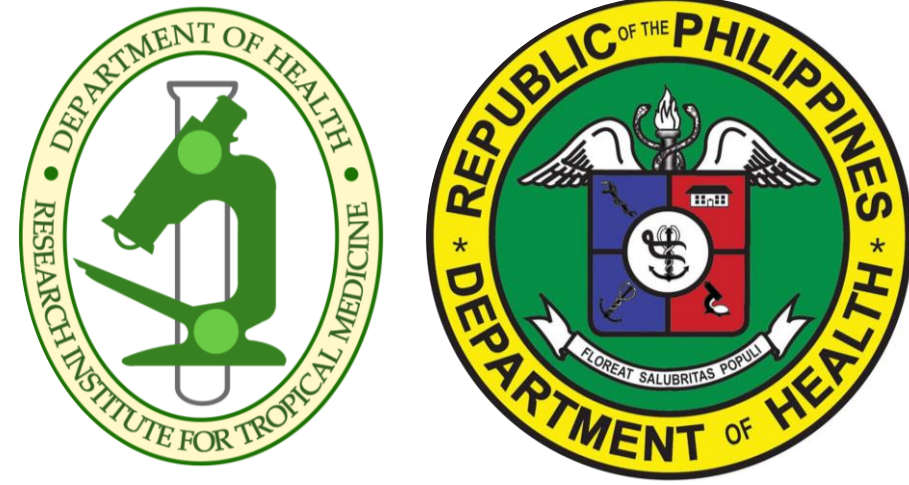




# Antibiotic prescribing for surgical prophylaxis in 15 Philippine Hospitals: results from a 4-year surveillance period using repeated point prevalence surveys

Philippines



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## BACKGROUND & OBJECTIVES

Surgical prophylaxis is a “low-hanging fruit” in our antimicrobial stewardship program. We aim to describe **antibiotic prescribing patterns for surgical prophylaxis in 15 Philippine hospitals**, and to assess the **evolution of relevant quality indicators over a 4-year surveillance period**.

## METHODS

Data were collected on a yearly basis from 2018 to 2021 in 15 hospitals in the Luzon and Visayas regions, using the Global-PPS protocol. All inpatients receiving an antimicrobial on the day of PPS were included. Data were recorded on the antimicrobial agents, indication for treatment and a set of quality indicators. We descriptively analysed all systemic antibiotic (ATC J01) prescriptions for surgical antibiotic prophylaxis (SAP). The evolution of quality indicators over time was assessed using the chi-squared test for trend.

## RESULTS

A total of 1640 SAP prescriptions for 1479 patients were included. The most common types of surgery for which SAP was prescribed were **obstetric and gynaecological** procedures (39.8% of SAP prescriptions), **gastrointestinal** procedures (20.4%), and **orthopaedic/plastic** surgery (14.6%). The most used antibiotics for surgical prophylaxis overall were **cefuroxime** (32.5%), **cefazolin** (11.6%) and **amoxicillin** (9.7%). Relative use of different antibiotics varied by type of surgery (figure 1). Overall, up to 51.9% of SAP prescriptions was for Watch antibiotics (figure 2).

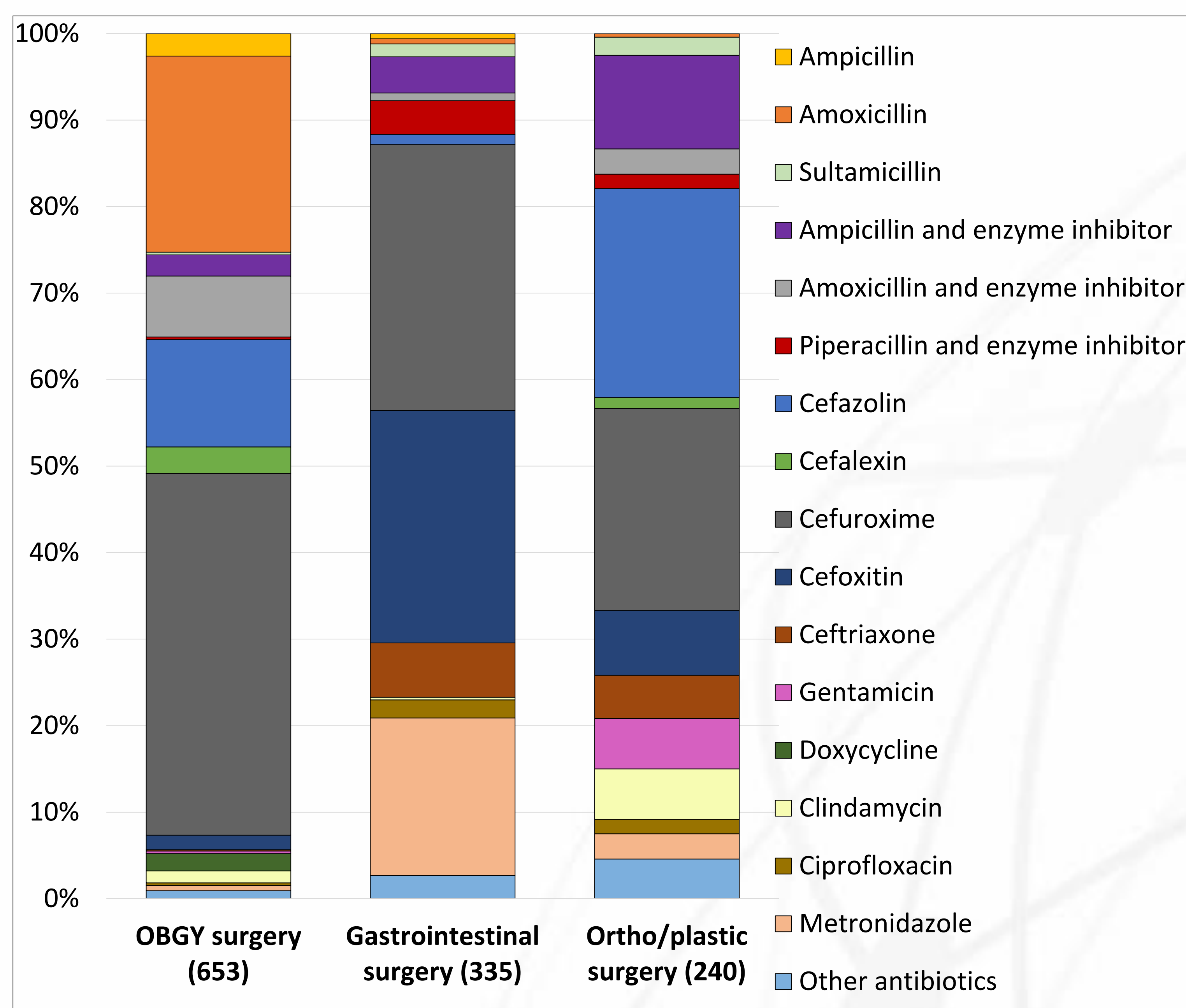


Fig 1. relative use of antibiotics for the most common types of surgery, in % of prescriptions (OBGY: obstetrics-gynaecology)

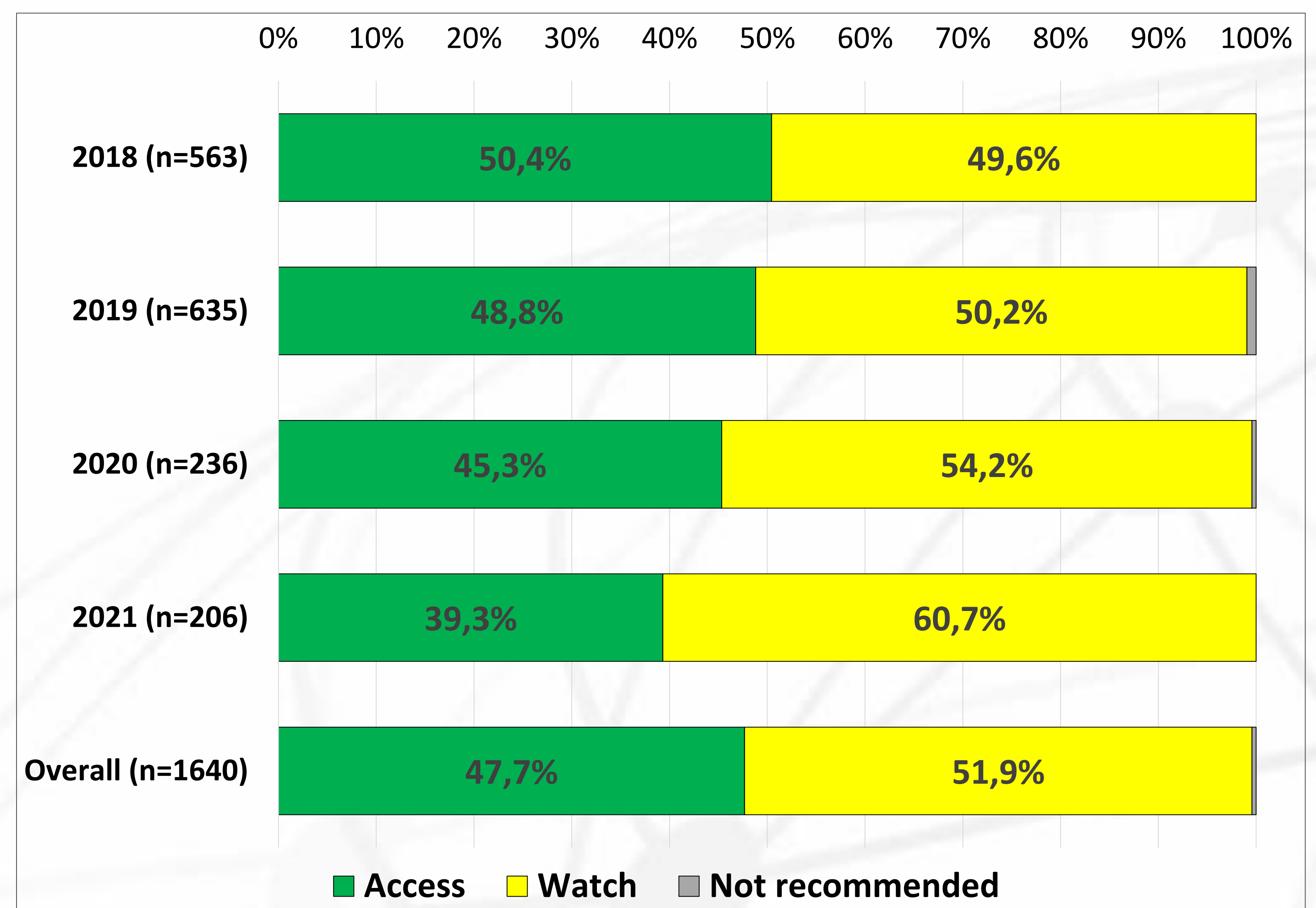


Fig 2. prescriptions for surgical antibiotic (J01) prophylaxis according to WHO AWaRe classification, in % of prescriptions

The **reason for prescribing** and the **stop/review date** was documented for 57.9% and 53.5% of prescriptions, respectively. Overall, 60.1% of prescriptions were **guideline-compliant**, however, up to 82% had a **duration** longer than 24 hours. A significantly increasing trend could be observed for the quality indicators ‘reason in notes’ and ‘stop/review date documented’ and there was a significantly decreasing trend in SAP given for more than 24 hours. However, guideline compliance seemed to have decreased between 2018 and 2021 (table 1).

Table 1. Quality indicators for surgical antibiotic prophylaxis prescriptions, 2018 - 2021

	2018 (n=563)	2019 (n=635)	2020 (n=236)	2021 (n=206)	p-value*
Reason in notes	58.8%	43.9%	75.4%	78.2%	<0.001
Stop/review date documented	44.8%	53.5%	59.7%	70.4%	<0.001
Guideline compliance**	63.7%	62.6%	51.7%	52.8%	<0.002
Guidelines missing	3.6%	3.1%	0.0%	1.5%	0.012
SP duration > 24 hours	82.9%	86.1%	79.7%	69.4%	<0.001

\* chi-squared test for trend. A p-value of 0.05 was considered significant. Improvements are marked in green, decline is marked in red. \*\*excludes prescriptions with missing guidelines and prescriptions with insufficient information to assess compliance

## CONCLUSION

Although there seemed to be a decreasing trend in surgical prophylaxis given for more than 24 hours, majority of prescribers are still not compliant to the National Antibiotic Guideline. These results will be presented to the Department of Health and relevant medical societies for the development of policies in promoting strict compliance of surgical prophylaxis guidelines in hospitals. Monitoring of these indicators will be done in subsequent PPS.

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