



The Global Point Prevalence Survey (Global-PPS): surgical antimicrobial prophylaxis in the Philippines from 2017-2022

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BACKGROUND & OBJECTIVES

Surgical antimicrobial prophylaxis (SAP) is recognized to prevent surgical site infections (SSI). Evidence shows that in most cases, a single preoperative dose of SAP is equally effective to multiple postoperative doses for prevention of SSI (NJ Ahmed et al., 2023). However, it is still a common practice among surgeons to give additional postoperative doses of antibiotics. We aim to evaluate SAP prescribing patterns in hospitals in the Philippines from 2017-2022.

METHODS

Point prevalence surveys (PPS) of hospital antimicrobial prescribing were conducted in the Philippines from 2017-2022, using the Global-PPS methodology (www.global-PPS.com). All inpatients receiving a systemic antibiotic (ATC J01) for SAP on the day of survey were included. Data collected included details on the antibiotics, types of surgery, and a set of quality indicators. The Global-PPS web-based application was used for data entry, validation and reporting.

RESULTS

Data were collected from 62 hospitals in the Philippines (2017:16, 2018:28, 2019:31, 2020:34, 2021:50, 2022:57). A total of 6,589 patients receiving SAP were included (7,738 prescriptions). Up to 43.4% of patients received SAP for obstetric/gynaecological procedures, followed by gastrointestinal procedures (21.5%) and orthopaedic/plastic surgery (18%). Combined for all years, a single-dose SAP comprised 11.3%, multiple-dose SAP (<24 hours) 10.8%, and SAP lasting >24 hours 77.8% of prescriptions. Figure 1 provides results by year. Cefuroxime was the most common antibiotic given for SAP, followed by cefazolin (Table 1).

Three of the most common antibiotics for SAP are classified under the WATCH list of the WHO AWaRe classification (cefuroxime, cefoxitin, ceftriaxone). Quality indicators included documentation of reason in notes and stop/review date, guideline compliance and duration >24 hours (Table 2). Guideline compliance ranged from 42.6% to 64.9%.

Table 1. Ten most commonly used antibiotics (J01) for surgical prophylaxis (%), 2017-2022

Antibacterial for systemic use	AWaRe	2017 (n=947)	2018 (n=1435)	2019 (n=1053)	2020 (n=577)	2021 (n=1426)	2022 (n=2300)
Cefuroxime	Watch	30.6%	37.4%	35.5%	30.2%	33.9%	31.9%
Cefazolin	Access	10.2%	10.9%	8.7%	10.6%	10.2%	14.0%
Cefoxitin	Watch	8.7%	7.6%	9.2%	7.1%	6.4%	6.4%
Ceftriaxone	Watch	5.3%	4.8%	5.3%	10.2%	7.2%	8.6%
Metronidazole	Access	5.8%	5.4%	5.7%	7.3%	6.4%	6.4%
Amoxicillin and enzyme inhibitor	Access	7.6%	3.8%	6.4%	3.1%	10.1%	4.2%
Amoxicillin	Access	3.2%	3.8%	8.6%	4.3%	1.9%	2.4%
Clindamycin	Access	2.7%	3.2%	2.3%	2.3%	4.1%	3.2%
Ampicillin and enzyme inhibitor	Access	3.3%	3.8%	3.5%	3.6%	2.0%	2.2%
Ampicillin	Access	2.7%	2.0%	2.4%	2.8%	3.4%	2.5%

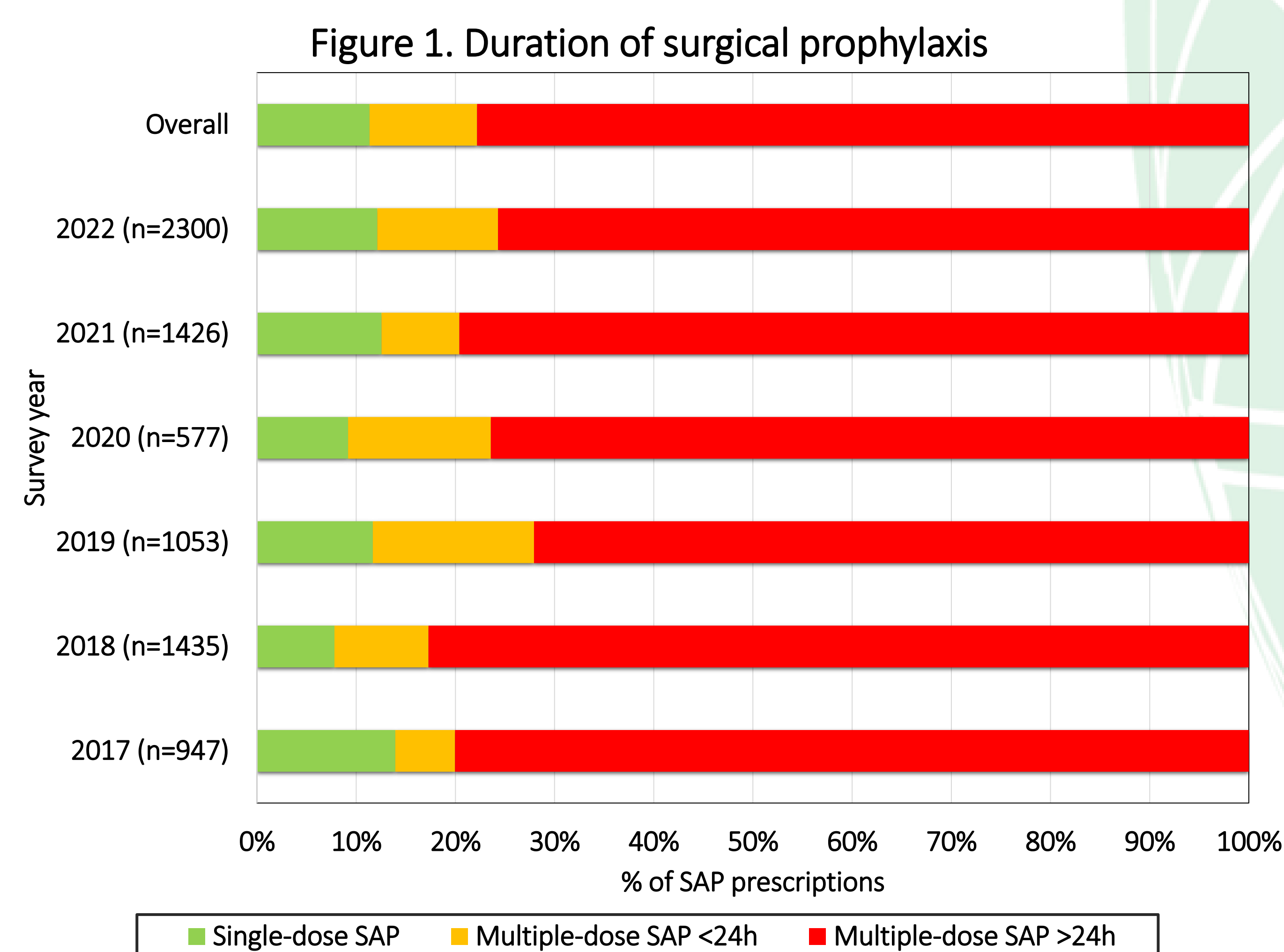


Table 2. Quality indicators for surgical prophylaxis prescription (%), 2017-2022

	2017 N=947	2018 N=1435	2019 N=1053	2020 N=577	2021 N=1426	2022 N=2300
Reason in notes	48.5%	61.5%	47.1%	59.4%	62.7%	65.7%
Stop/Review date documented	40.1%	42.8%	54.1%	51.0%	51.3%	51.0%
Guideline Compliance*	42.6%	54.5%	61.0%	48.3%	44.0%	64.9%
Guideline Missing	4.5%	4.2%	2.6%	1.0%	2.8%	2.0%
SP duration > 24 hours	80.0%	82.7%	72.1%	76.4%	79.6%	75.7%

* when guidelines were available

CONCLUSION

When combining all participating hospitals, no to few improvements are observed in antibiotic type, duration of SAP and quality indicators assessed over the years. Policies for surgical antibiotic prophylaxis should be strengthened as part of hospital's antimicrobial stewardship programs in the Philippines, with an increase of the use of access antibiotics, a decrease of prolonged SAP and adherence to guidelines being key targets for improvement. Consultation with the Department of Health, surgical societies, and the adult, paediatric and obstetric infectious diseases societies was conducted to develop policies on the implementation of the SAP guideline in both private and public hospitals.

Reference: Ahmed NJ et al. Antibiotics for preventing infection at the surgical site: Single dose vs. multiple doses. Saudi Pharm J. 2023 Dec;31(12):101800.

