

# Hospital Antimicrobial Point Prevalence Survey (PPS) in Ireland: 2020

Rebecca Breslin<sup>1</sup>, Ajay Oza<sup>2</sup>, Karen Burns<sup>2</sup>, Marie Philbin<sup>3</sup>, Sarah Fenton<sup>1</sup>

1. Irish Antimicrobial Pharmacists' Group (IAPG) 2. Health Protection Surveillance Centre (HPSC), 3. HSE-Antimicrobial Resistance & Infection Control (AMRIC) Division

## INTRODUCTION

- The hospital antimicrobial (AM) PPS is performed annually by antimicrobial stewardship teams across Ireland, as a snapshot of AM prescribing
- Review of PPS findings over time demonstrates trends, areas for intervention and impacts of interventions

## AIMS

- National analysis of AM PPS data collected from Irish hospitals in 2020 and comparison with prior AM PPS findings in 2019 and 2018

## METHODS

- The PPS protocol and data collection form were revised by the IAPG and HPSC for PPS 2019 & 2020, re-aligning questions with the European PPS protocol, where feasible. Broader inclusion criteria for review of appropriate duration reflect the changing evidence base on antibiotic duration
- The 2020 AM PPS was carried out during September and October
- Data were analysed by the HPSC

## RESULTS (1)

- The intravenous (IV) route accounted for 68% of AM in 2020, similar to 2018 & 2019 (67%)
- Of IV AM, 14% were potentially suitable for an oral switch, which was lower than 2019 (17%)
- Respiratory, intra-abdominal and skin/soft tissue infections (SST) were the most common body sites for which antimicrobials were prescribed across all years of PPS
- Table 1 displays key national results from AM PPS: 2018 – 2020

Table 1. Summary of key AM PPS results: 2018 - 2020

	2020	2019	2018
Hospitals included (n)	48	45	44
Patients included (n)	8,458	8,916	8,814
Median prevalence of AM use (%)	40	40	39
% of AM prescriptions			
Community-infection	54	55	55
Hospital-infection	24	25	23
Medical prophylaxis	8	9	9
Surgical prophylaxis	10	8	8

## RESULTS (2)

- Co-amoxiclav and piperacillin-tazobactam combined accounted for 38% of all prescriptions, unchanged from previous years (2019; 37% and 2018; 36%)
- Metronidazole ranked third in all three years (6%)
- Welcome reductions in proportional use of ciprofloxacin and clarithromycin, with a corresponding increase in doxycycline from 2018 to 2020
- Increasing trends in prevalence of the broad-spectrum agents piperacillin-tazobactam, meropenem and ceftriaxone were observed

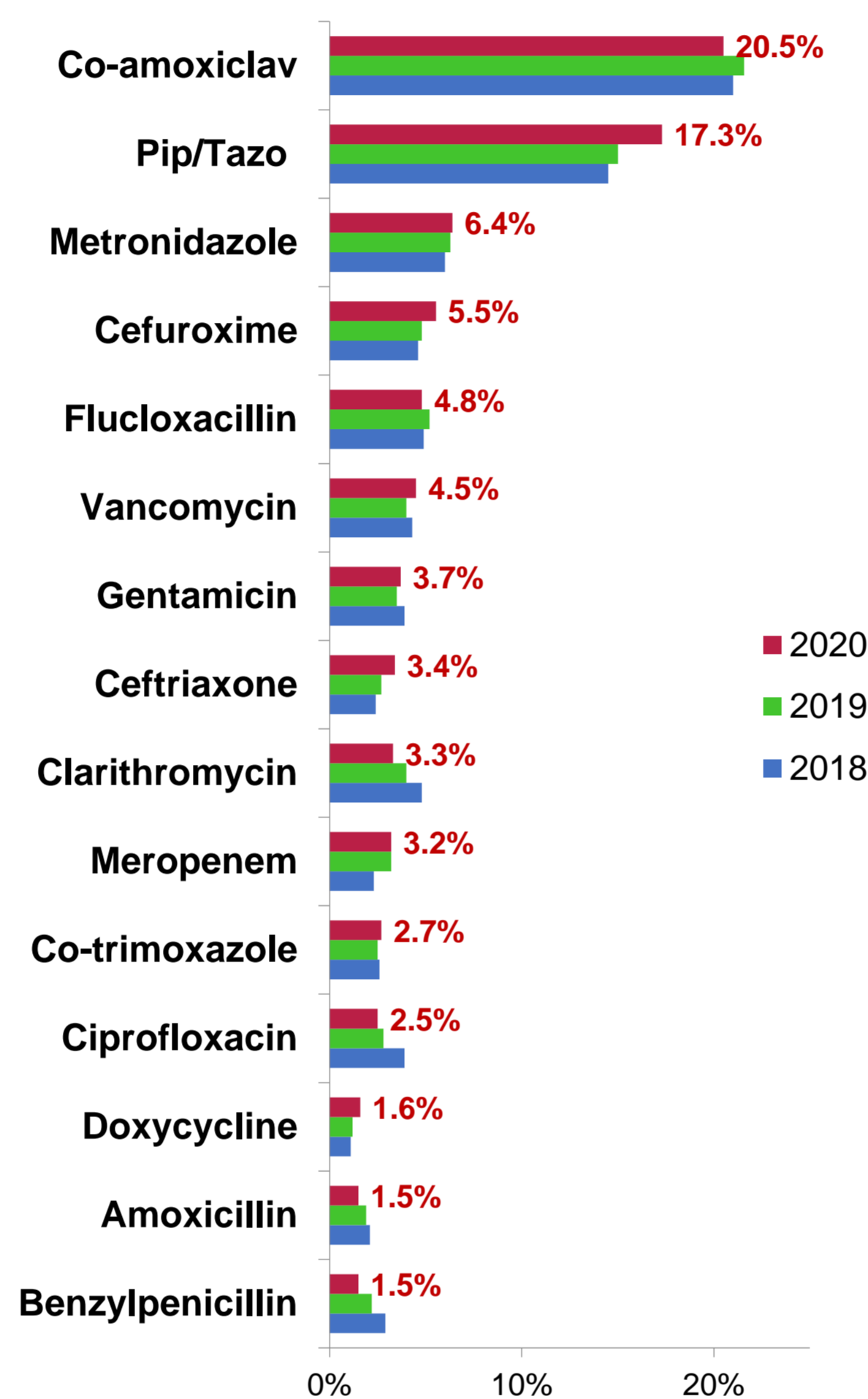


Figure 1: Top 15 prescribed AM: 2018 - 2020

## RESULTS (3)

- Continued high compliance of AM prescriptions overall with local guidance in 2020 (85%), with a welcome increase in compliance of restricted AM prescriptions compared with 2019, from 80 to 86%
- Continued high compliance of AM prescriptions with a documented indication in 2020 (91%)
- Annual improvements in proportion of prescriptions with documented stop or review date observed from 34% (2018) to 45% (2020)
- In PPS 2020, a revised question about appropriateness of AM duration at time of PPS was included, with 89% of prescriptions deemed appropriate
- A welcome reduction in the proportion of Surgical Antimicrobial Prophylaxis (SAP) >24 hours duration to 28% in 2020 (from 37% in 2018) (Figure 2 +3)

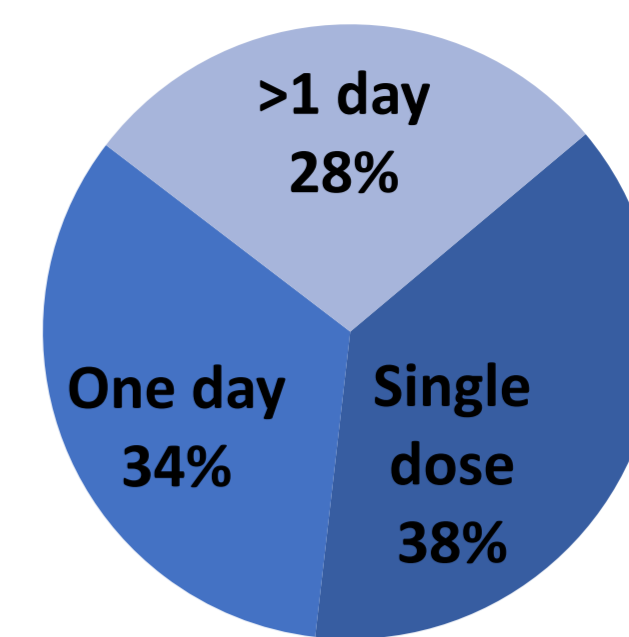


Figure 2: Breakdown of SAP prescriptions: 2020

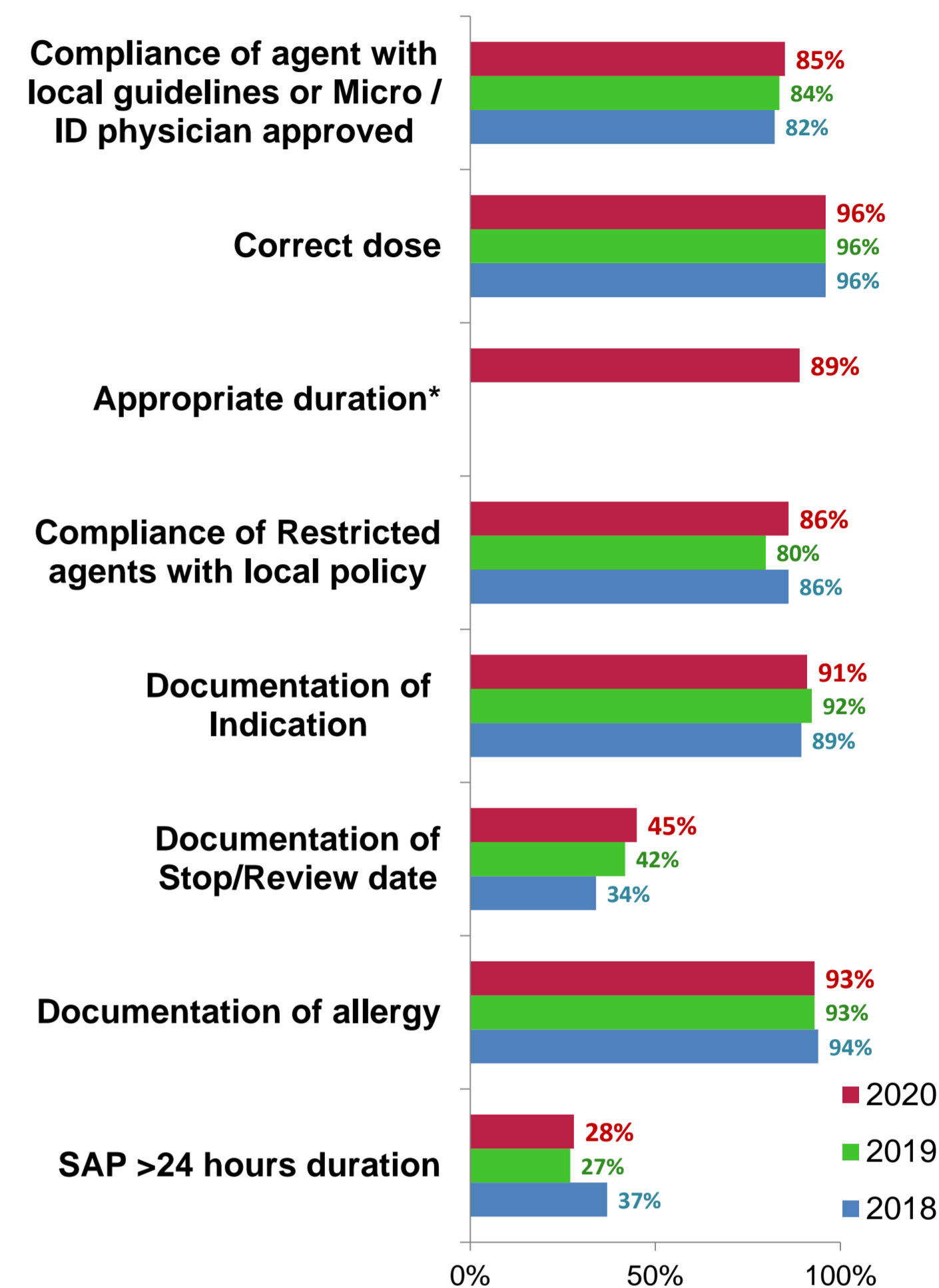


Figure 3: Compliance with key indicators of good prescribing in PPS 2018 - 2020 \*Baseline figure reflects broader inclusion criteria for review of appropriate duration in 2020

## DISCUSSION

- Despite the COVID-19 pandemic, the 2020 AM PPS had the highest number of participating hospitals to date

### Positive findings

- A decrease in SAP duration, reflecting the implementation of evidence-based practice in Irish surgical units
- Maintained high compliance with prescribing of restricted AM
- A high baseline of 89% of AM prescriptions of appropriate duration was achieved

### Areas for improvement

Stewardship key areas for improvement in 2021 include the following:

- Further reduction in SAP duration
- Promotion of IV to PO switch opportunities
- Further improvement in documentation of stop or review date

### THANK YOU!

The AM PPS would not take place annually without the input of the IAPG, HPSC, antimicrobial stewardship teams & data collectors of the participating hospitals

