IMPLEMENTATION OF ANTIMICROBIAL STEWARDSHIP PROGRAMS SOFTWARE APPLICATION

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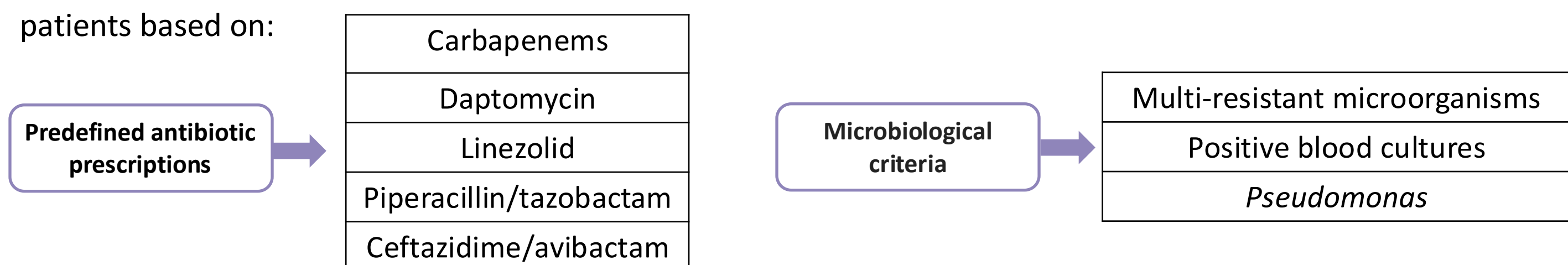*Contact: alentado_anna @gva.es*

What was done?

The Antimicrobial Stewardship Programs (ASP) team, in collaboration with the information technology unit, designed, developed, and implemented a computer application to support their work. This application screens inpatients, detecting predefined alerts based on prescribed antibiotic, the infection-causing microorganism, positive blood cultures or complex patient cases.

Why was it done?

ASP aim to improve prescription quality by optimising treatments and controlling difficult infections. It is essential to have a software tool that allows real-time monitoring of both treatments and certain cultures.
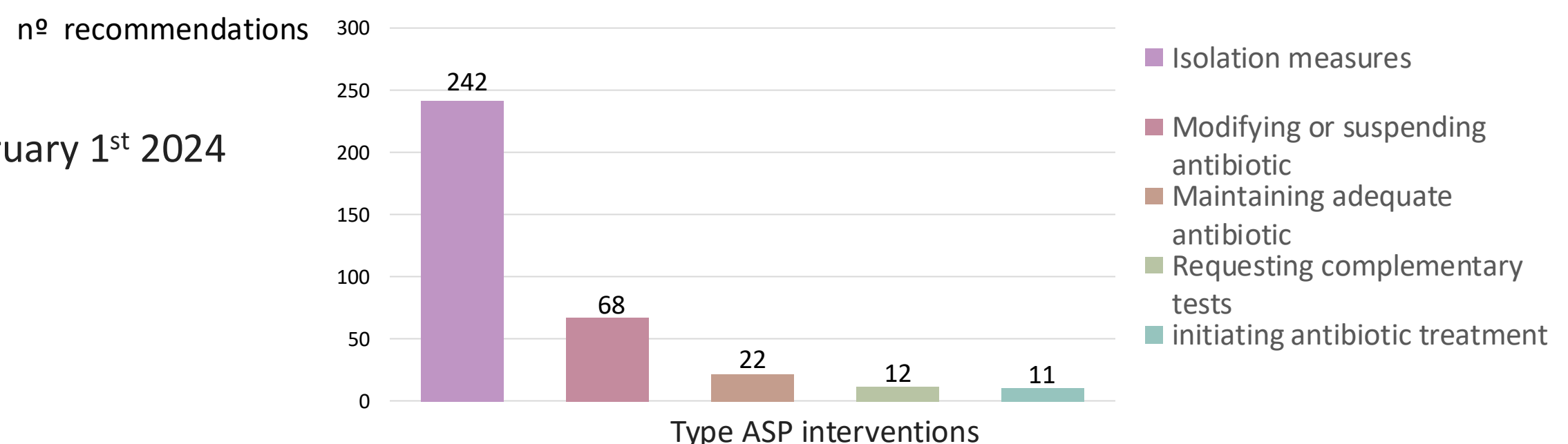
How was it done?

This alert system is based on the integration of the various hospital clinical information systems. It selects admitted patients based on:

Predefined antibiotic prescriptions →	Carbapenems
	Daptomycin
	Linezolid
	Piperacillin/tazobactam
	Ceftazidime/avibactam

Microbiological criteria →	Multi-resistant microorganisms
	Positive blood cultures
	Pseudomonas

Patients who are difficult to manage can be manually included in the computer programme. The antimicrobial and microbiological criteria are dynamic and can be modified as needed.

What has been achieved?

- From June 1st 2023 to February 1st 2024
- 300 different patients
- 355 ASP recommendations

nº recommendations — Type ASP interventions

- Isolation measures: 242
- Modifying or suspending antibiotic: 68
- Maintaining adequate antibiotic: 22
- Requesting complementary tests: 12
- initiating antibiotic treatment: 11

What is next?

This application is a key communication tool for ASP teams, allowing them to recommend antimicrobial treatment optimizations. It automatically records notes in patients' clinical histories, making them accessible to healthcare professionals and easily adaptable for use in other hospitals.

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