

IMPLEMENTATION OF ELASTOMERIC INFUSION PUMPS FOR THE ADMINISTRATION OF ANTIMICROBIAL AGENTS IN COORDINATION WITH HOME HOSPITALITATION

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WHAT WAS DONE?

Implementation of a circuit for:



Preparation
Elastomeric Infusion Pumps (EIPs)
Hospital Pharmacy Service



Dispensing
Hospital at Home (HH)



Administration
Continuous Intravenous of Antimicrobial Agents
Patient's House

WHY WAS DONE?

The purpose of this initiative is to provide an **effective and safe alternative for treating infections in patients** who would otherwise **require prolonged hospital stays**.

The use of EIPs improves:

- Patients' quality of life.
- Reduces treatment costs by decreasing hospital admissions.

HOW WAS IT DONE?



The **Pharmacy Service** contributed to the development of this initiative by:

- Studying the **stability** of antimicrobial agents in the EIPs.
- Determining dilution volumes based on the **maximum possible concentration**.
- Assessing **storage conditions**.
- **Selecting the appropriate EIP for each antibiotic** to ensure effective and safe infusion rates.



EIPs are prepared in **laminar flow hoods to maintain a sterile environment** during medication preparation.



Educational materials for healthcare professionals were developed, and **training sessions** were conducted for HH staff.

WHAT HAS BEEN ACHIEVED?



• 2,223 EIPs
• 123 Patients



Reduction of 1,426 hospital days

The antimicrobial agents used were:

Meropenem	59.6%	Tobramycin	1.5%
Piperacillin/Tazobactam	19.9%	Ampicillin	0.7%
Cefazolin	6.8%	Acyclovir	0.6%
Ceftazidime	5.6%	Ceftolozane/Tazobactam	0.6%
Ceftaroline	2.2%	Ceftriaxone	0.4%
Penicillin G	2.1%		

Comparison to previous years:

	2017 - 2019	2019 - 2023
Number of Infusers	↑ 243%	↑ 11.9%
Number of Patients	↑ 131%	↑ 36.7%

WHAT IS NEXT?

Future research is expected to expand on the efficacy and safety of this methodology by **studying the stability of antimicrobial agents at different concentrations** to establish a sustainable model that can benefit an **increasing number of patients**.

Additionally, **patient surveys** will be conducted to gather insights into their experiences and **enhance their quality of life**.

