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BACKGROUND

In recent years, the incidence of **medicine shortages (MS)** has rapidly increased at the international level [1,2]. These supply problems can affect the quality of patient care, due to potential interruption of treatment, and therefore, constitute **an important issue** for hospital pharmacists [3].

AIM AND OBJECTIVES

This study aimed to **analyse MS** and **quantify** their **economic impact**.

MATERIALS AND METHODS

A retrospective observational study was conducted in a 1015-bed teaching hospital, from April 2018 to September 2020. It was based on a spreadsheet manually weekly updated for MS.

Quantitative indicators were:

- Number** of MS and involved drugs
- Duration** of MS
- Classification of the **pharmaceutical interventions** to manage MS
- Economic impact** of MS
- Time** devoted to MS weekly analysis

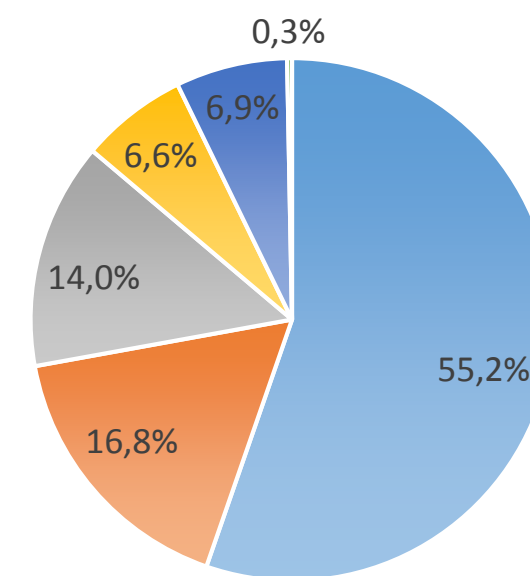
RESULTS

- 706 MS** were reported and concerned **459 drugs**
- Average time** to restore availability was **60 days**
Median duration was **33 days**

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RESULTS

c) **Pharmaceutical strategies** to solve MS were displayed as:



- Sufficient stock available at the pharmacy (55,2 %)
- Replacement by the same drug (16,8 %)
 - Same active ingredient, same dosage, same pharmaceutical form, different packaging and/or different pharmaceutical company
- Replacement by a similar drug (14,0 %)
 - Same active ingredient, different dosage and/or pharmaceutical form
- Replacement by an alternative drug (6,6 %)
 - Different active ingredient
- Foreign medicine importation (6,9 %)
- Restricted use in a limited number of wards (0,3 %)

d) **Economic impact**

Evaluation period: 126 weeks

Hypothetical cost : 984.533€

(based on the prices with the regular suppliers)



Estimated cost due to MS: 1.633.340€

(based on the prices of the pharmaceutical strategies used)

e) Management of MS required **two full-time equivalents**: one of pharmacist and one of pharmaceutical-technical assistant (cumulative annual remuneration of 128.000€).

CONCLUSION

These results suggest that MS generated an **annual cost of 395.761€** in our hospital. Strategies to minimise the effects of MS should be implemented.