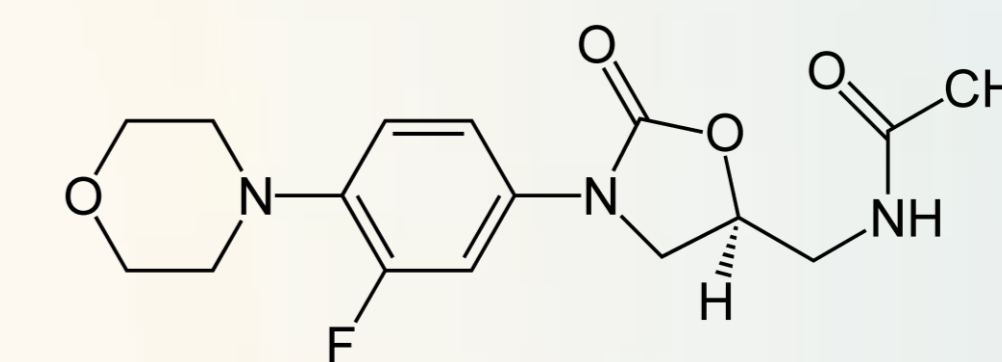


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Background / Objectives

- **Linezolid (LNZ)** is an **antibiotic** indicated for the treatment of **methicillin-resistant gram positive infections**.
- Following recent unavailability of Fosfomycin in France, local standards for the treatment of **nosocomial meningitis and nosocomial brain abscesses (NM-NBA)** have temporarily changed. Indeed, in Toulouse's Teaching Hospital, the **Anti-infectious Committee** has decided to modify its recommendations, substituting Fosfomycin for LNZ.
- At the same time, the use of LNZ is strictly controlled in our hospital, in order to preserve antimicrobial activity as long as possible.
- The objective is to present an overview of the use of LNZ in a neurosurgery ward, in Toulouse's teaching hospital.



Materials and Methods

We analyzed the prescriptions of LNZ **from January 1st 2011 to August 1st 2012**, collecting data on type of infection, germ and antibiotic sensitivity, treatment duration, total cost of antibiotic treatment.

Results

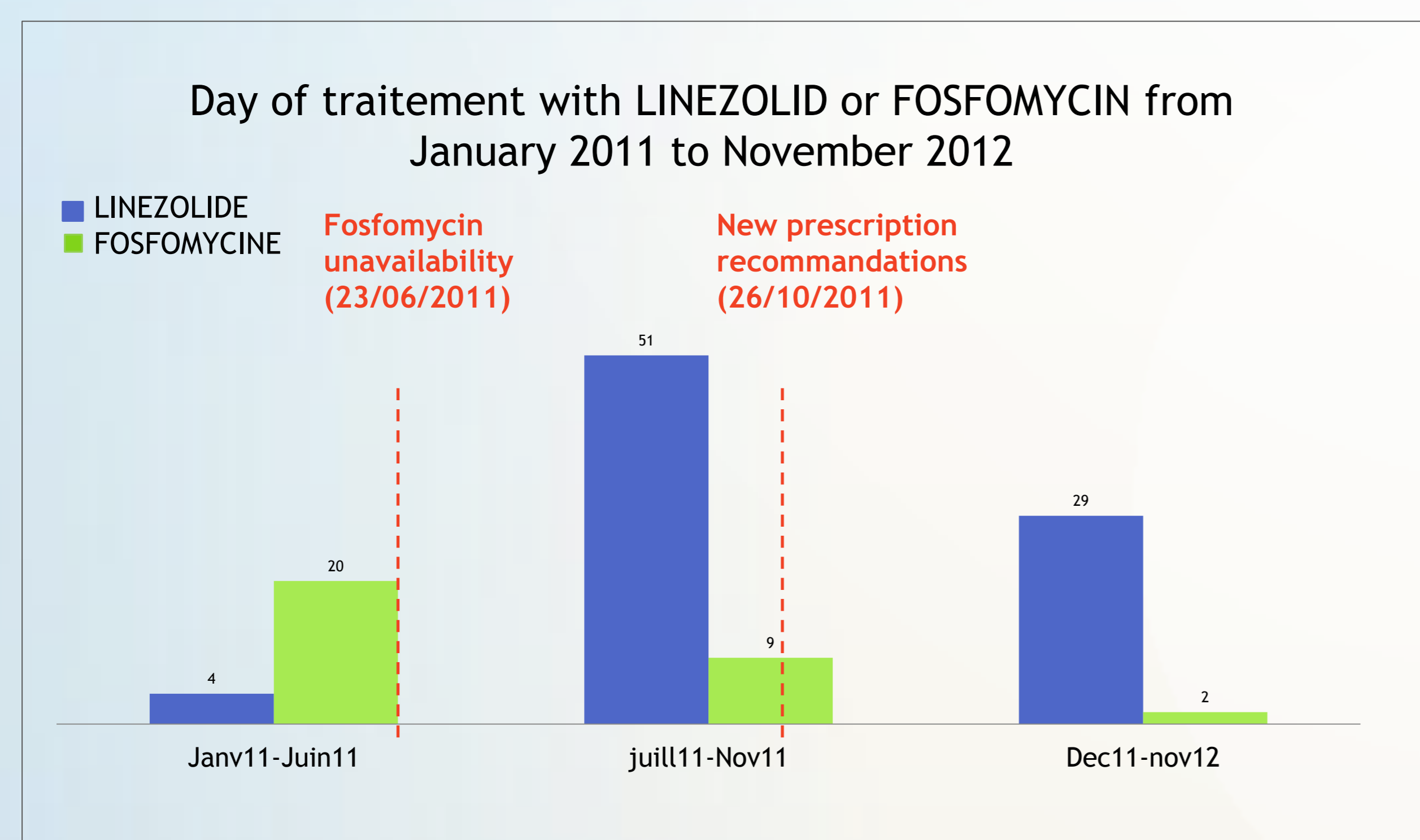
- ❖ **When Fosfomycin was still available (from January 1st 2011 to August 1st 2011)**, LNZ was only **prescribed to 6 patients**, none of whom were treated for NM-NBA.

Indications	Empiric (E) / Curative(C)	Multi Resistant Bacteria (MRB) Susceptible Bacteria (SB) Sterile (S)
Pneumoniae	4 E	1 MRB / 1 SB / 2 S
Sepsis	1 E / 1 C	2 MRB

- ❖ **When Fosfomycin became unavailable (from August 1st 2011 to August 1st 2012)**, **72 prescriptions of LNZ** were written, of which **59 (82%) were for NM-NBA**.

- 54 (92%) were initially empirical
- According to our information available to the pharmacy, 45 (76%) have been **revaluated at days-3** with **advice from a senior infectious disease specialist which is a 2008 quality recommendation from French health authority**. Following the reevaluation :
 - **19 treatment discontinuation** (42%),
 - 29% (17/59) of identified germs were **multi-resistant**
 - 44% of cases (26/59) no germ was isolated
 - In one case, the isolated germ was resistant to LNZ

- ❖ The substitution of Fosfomycin by LNZ led to an estimated **extra cost of 2014 euros per month**.



Indications	Empiric (E) / Curative(C) Day 0	Multi Resistant Bacteria (MRB) Susceptible Bacteria (SB) Sterile (S)
Pneumoniae	4 E	8 MRB / 1 SB
	5 C	
Sepsis	6 E	4 MRB / 2 SB 1 MRB was linezolid resistant
	3 C	
Meningitidis with external ventricular drain	28 E	8 MRB / 6 SB / 14 S
	3 C	
Meningitidis post surgery	28 E	6 MRB / 9 SB / 13 S
	2 C	
Nosocomial brain abscesses	9 E	2 MRB / 4 SB / 3 S
	3 C	
Others	1 C	1 MRB 1 MR, 2 SB 1 MRB
	2 E, 1 C	
	1 C	

Conclusions

Unavailability of Fosfomycin has led to a **strong increase in the use of LNZ**, particularly for the treatment of **NM-NBA**, causing **extra costs** and increasing the risk of **LNZ resistance**.

A good use of this antibiotic, with the contribution of Hospital Pharmacists, should help us preserve its potential.