



# CAN THE CLINICAL PHARMACIST INCREASE HOSPITAL STAYS' PRICING ?

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## BACKGROUND AND IMPORTANCE

In France, hospitalizations' reimbursement is linked to care severity. That is to say the cost of a patient's stay will depend on the comorbidities managed during the hospitalization, both in the medical history and those appearing during the stay. In this context, health establishment must be as comprehensive as possible on the comorbidities' registration. This is carried out by the medical information departments (MID) of the health establishments, based on the data entered by doctors in patients' files.

## AIM AND OBJECTIVES

One of clinical pharmacist's mission is medical prescription validation. The purpose of drug prescriptions is to manage comorbidities. Thus, as part of prescriptions' validation, the clinical pharmacist can easily highlight comorbidities associated with specific treatments, in order to improve their codification and consequently to better valorise hospital stays, or at least to reinforce the stay in anticipation of health insurance checks.

## MATERIALS AND METHODS

Six comorbidities, associated with the prescription of specific therapies, were chosen :

Comorbidities chosen	Prescribed treatments
Dyskalemia	Potassium or Polystyrene sulfonate
Neuropathic pain or anxio-depressive disorder	Amitriptyline, Anafranil, Pregabalin, Gabapentin, Duloxetine or Capsaicin
Iron deficiency anemia	Injectable iron
Hypovolemia	Ringer lactate, Serum albumin or Gelatin
Hypercalcemia	Bisphosphonate and / or Calcitonin
Severe Infection	Linezolid, Daptomycin, Teicoplanin, Aztreonam and Carbapenem

- Retrospective work conducted in may and june 2019
- All stays ending between 01/01/2019 and 31/03/2019, with at least one prescription of these therapies
  - Check of the stays' coding by the MID
  - No comorbidity associated with the specific treatment → analysis of the medical records
  - According to the information retrieved, proposal to add comorbidity to the stay's coding
    - Validation of these proposals by the MID
    - Revaluation of the stays' cost

## RESULTS

The table below summarizes, for each co-morbidity, the total number of stays found during the 3 months of the period analyzed (i.e. the number of stays with at least one prescription for a treatment in relation to the comorbidity), the total number of stays for which the addition of comorbidity has been proposed and the resulting financial impact.

Comorbidities	Total stays	Proposal to code comorbidity for	Financial impact
Dyskalemia	175	34 stays	No revalorisation*
Neuropathic pain or anxio-depressive disorder	239	143 stays	7 stays, resulting in a potential revaluation of 6 000€**
Iron deficiency anemia	155	28 stays	1 single stay has been increased, by 530€***
Hypovolemia	124	0 stay	Set appart because of the difficulty to confirm these comorbidities with the only retrospective medical record information
Severe Infection	16	0 stay	
Hypercalcemia	41	5 stays	No revalorisation*

\* The severity of uncoded dyskalemia and hypercalcemia was insufficient to cause an increase in the stay's value.

\*\* Potential revaluation because it was not possible to validate with certainty that the drug prescription was related to neuropathic pain or anxio-depressive disorder, because of the retrospective nature of this work.

\*\*\* Almost all uncoded anemias were found in patients managed in day hospitals. However, this service is special with regard to pricing, so the comorbidity's addition did not enhance the stays' value.

## CONCLUSION AND RELEVANCE

The stays' remuneration is hospitals' main income source. This work allows to quickly determine if the clinical pharmacist can bring added value in the field of hospital stays' pricing. A potential recuperation of 6000€ may seem anecdotal in the annual budget, but it's not negligible when put in relation to the time allocated to this work. Moreover, the next step is the transition to forward looking. This activity will therefore be part of the prescriptions' validation. It would also be possible to assess other comorbidities. Finally, each health establishment can focus on the comorbidities most specific to its activity. Such as, for instance, neuropathic pain within cancer center.