Factors Having an Impact on the Prescription of Cancer Treatments in Hospital at Home Program in Bronchopulmonary Cancer: A French Claims Database Analysis (2016-2021)

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OBJECTIVES

> In France, most cancer treatments are given in a hospital (medical, surgical and obstetrics - MSO). Several recommendations were developed by the French HTA [1,2] to develop the use of home hospitalization (HH) to reduce the burden of cancer disease management on hospitals and follow the aspirations of affected patients to be maintaining at home.

> **The objective of this study is to evaluate the factors impacting the dispensation of cancer treatment (CT) in HH vs in MSO.**

METHODOLOGY

> This is a retrospective study based on the French national claims database (PMSI). All adult patients diagnosed with bronchopulmonary cancer (ICD10 C34) and having a hospitalization (MSO or HH) with administration of a CT between 2016 and 2021 were included.

> The impact of patient's characteristics (age, gender, comorbidities, region of residence), type of treatment, distance to the hospital, and type of hospital (public, private) on the type of hospitalization (HH vs MSO) were evaluated using a multivariate logistic regression model with forward stepwise selection of the variables.

> Some patients switch between HH and MSO during the study period and it emerges that the use of HH in the care pathway is marginal for them. Further we considered that if a patient has more than 30% of his hospitalizations for CT carried out at home than he will be labeled as an HH patient.

RESULTS

> Initially, 188,108 patients were included, 99.6% with a MSO hospitalization for CT, 0.4% with a HH for CT. The number of patients hospitalized over the years is uniform across the French regions.

> Table 1 shows the types of treatment included in the analysis, and the distance between residence and the actual or theoretical hospital observed for the disease management.

> Patients hospitalized in HH had more metastatic pathologies (70% vs. 49%), heart failure (5% vs. 4%), cerebrovascular pathologies (6% vs. 4%) and hemiplegia (8% vs. 3%) than those hospitalized in MCO (Figure 2).

Table 1 – Patients treatment and distance between residence and hospital

	Patients (n)
Targeted therapy	113
Intra-DRG chemotherapy	115 423
On-top–of-DRG (OTD) Chemotherapy	31 333
Radiotherapy	13 159
On-top–of-DRG (OTD) Immunotherapy	28 083
Distance* residence - hospital: mean (SD)	27,5 km (44,8)

**For MSO patients, the distance (continuous variable - km) was calculated between hospital and residence (observed relative to the hospital most "frequented" by the patient). For patients managed in HH, the distance was calculated between residence and the nearest facility (theoretically "frequented" if the patient was managed in MSO).*

Figure 1 – Patient characteristics by type of hospitalization

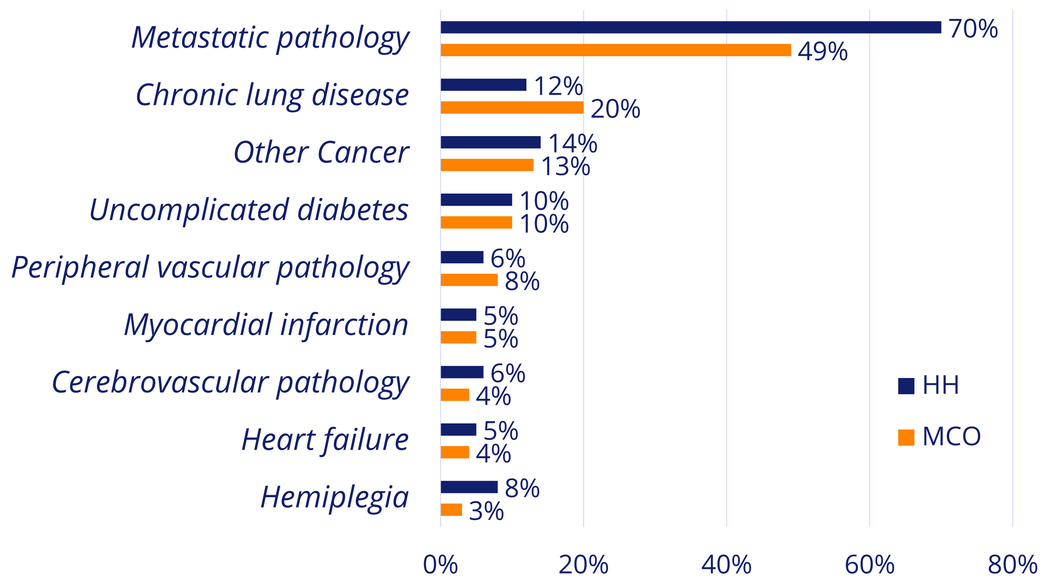

Figure 2 – Associated patient comorbidities by type of hospitalization

> The probability of being in HH was significantly higher for :
  - Women,
  - Patient with severe comorbidities (hemiplegia, cerebrovascular pathology, metastatic pathology, etc.),
  - Patients with disease management in public hospitals.

> The use of innovative costly immunotherapy and/or chemotherapy and radiotherapy were significantly associated with a poor probability of HH.

> Large disparities were observed in these results according to the region. Bourgogne-Franche-Comté, Bretagne and Hauts-de France regions were significantly associated with a high probability of HH.

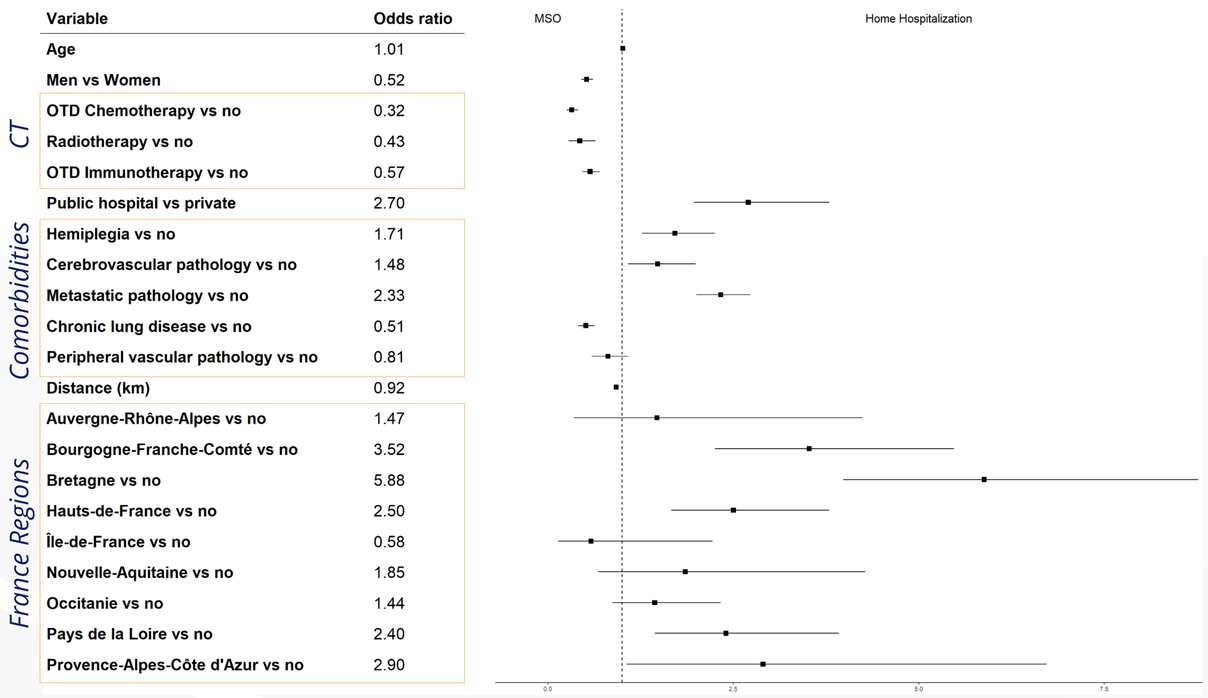

Figure 3 – Forest plot of the OR (results of logistic regression)

CONCLUSION

> This study provided a national understanding of the disparity in the development of HH in the management of the bronchopulmonary cancer according to patient characteristics, treatments administered and the region of residence, probably due to the uneven development of HH supply across the country [3]. These trends could be considered in the orientation of public health policies to support the development of HH in France.

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