Hospital costs impact of post ischemic stroke dysphagia: Database analyses of hospital discharges in France and Switzerland

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INTRODUCTION
Oropharyngeal dysphagia is frequent in hospitalized post-stroke patients and is associated with increased mortality and comorbidities. The aim of our analysis was to evaluate the impact of dysphagia on Length of Hospital Stay (LOS) and costs. The hospital perspective was used to assess costs.

METHODS
Hospital discharge databases comparing hospital stays for ischemic stroke associated with dysphagia vs stroke without dysphagia in France and Switzerland were analyzed. The French Medical Information System Program (PMSI) database analysis focused on 62'297 stays for stroke in the public sector. 6'037 hospital stays for stroke were analyzed from the Swiss OFS (Office fédéral de la statistique: Statistique des coûts par cas 2012) database. Diagnosis codes and listing of procedures were used to identify dysphagia in stroke patients.

RESULTS
Patients with post-stroke dysphagia accounted for 8.4% of stroke hospital stays in Switzerland, which is consistent with recently reported prevalence of dysphagia at hospital discharge (Arnold et al, 2016). The French database analysis identified 4.2% stays with post-stroke dysphagia. We hypothesize that the difference between the Swiss and French datasets may be explained by the limitations of an analysis based on diagnosis and procedure coding. Patients with post-stroke dysphagia stayed longer at hospitals (LOS of 23.7 vs. 11.8 days in France and LOS of 14.9 vs. 8.9 days in Switzerland) compared with patients without post-stroke dysphagia. Post-stroke dysphagia was associated with about 3'000 and CHF14'000 cost increase in France and Switzerland respectively.

DISCUSSION
In this study post-stroke dysphagia was associated with increased LOS and higher hospital costs. It is difficult to isolate the impact of dysphagia in patients with multiple symptoms and disabilities impacting rehabilitation and recovery.
After adjusting for confounding factors by matching stays according to age, sex and stroke complications, post-stroke dysphagia association with increased LOS and higher hospital costs was found to be independent of sensory or motor complications.

CONCLUSION
Post-stroke dysphagia is associated with increased length of hospital stay and higher hospital costs.

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