

TITLE: Building a DRG-classification for Hospital Home Care in France: challenges and outcomes

Introduction

In France, Hospital Home Care (HHC) enables medical care that would traditionally require a hospital setting to happen at home. Home care is allowed under specific circumstances. First, the patient, family members living in the same home and the referring physician must give their agreement. Second, only a subset of care and professionals are allowed. In recent years, French health care authorities have advocated for an increase in the use of HHC, and with it rose the need for proper tools to monitor HHC activity. Every HHC stay is coded and stored in a central national database, using nomenclatures such as ICD-10 for diagnoses or the French procedure classification (CCAM). Currently, only a small subset of these variables is leveraged. Our goal was to build a Diagnosis Related Groups (DRG) classification of stays for use in the French HHC sector, like the already existing schemes in acute and non-acute hospitals, with an emphasis on improving medical description and homogeneity.

Methods

HHC stays are grouped into main-DRGs with a grouping algorithm. Variables used to group are age, length of stay (LoS), diagnoses, procedures, and two variables specific to HHC: main and secondary type of care (MTC & STC). Most of the main-DRGs can be split into severity levels, describing the patient's comorbidities being cared for beyond the main condition. To set a severity level, all codes used to group the main-DRG are removed from the stay and the grouping algorithm is run again, looping until there are no remaining medical information to leverage. Additional groups can increase the stay's severity. Last, the stay's complexity is determined by patient-centric variables: the Karnofsky Index, Activities of Daily Living (ADL), age and social and environmental factors. Complexity describes variations in the cost of delivering care imputable to non-medical patient circumstances. The classification's performance was assessed by comparing the R^2 on LoS and costs, as well as qualitatively through experts use and feedback.

Results

The HHC DRG-classification has 100 main-DRGs, yielding around 500 final DRGs after severity and complexity splits are considered. The R^2 on LoS is now 16.9%, against 6.1% for the previous model, and 26.6% (vs 17.7%) on costs. Additionally, experts felt that their daily practice in HHC is adequately described by the new classification, which now allows for a clearer medical description and more homogeneous groups. A national experimentation began in July 2023, where all HHC stays are grouped with the new classification, and providers are informed of the results without financial impact.

Discussion

In collaboration with multiple groups of medical experts working in the HHC sector, we built and experimented a DRG-classification that adequately describes HHC activity in France. With HHC activity on the rise for the foreseeable future, this new tool paves the way for the next steps in HHC policy, such as a financing reform that could rely on the new classification to better reimburse providers for HHC stays.