**Supplemental digital content 3. Method for directly attributing expenditures to health conditions**

For expenditures items for which diagnoses are systematically recorded, we used this information to directly attribute expenditures to a single health condition. This method concerned hospitalizations (short stay hospital (SSH), rehabilitation care and psychiatry) and maternity leave. Maternity leave expenditures were simply attributed to maternity. For hospitalizations, the method was more complex, because the hospital discharge database contains several diagnoses for each hospital stay.

In SSH, there are three types of diagnoses:

* The primary diagnosis is the reason that led to the patient's hospitalization.
* When the primary diagnosis is not an illness, e.g., “Chemotherapy session for neoplasm”, a related diagnosis is indicated, e.g., “Malignant neoplasm of breast”.
* An associated diagnosis is a diagnosis or pathology that, relative to the primary diagnosis, increases the effort of care and the means used. There can be several associated diagnoses or none at all.

Therefore, expenditure on SSH stays were attributed to health conditions following two steps:

* Step 1: identify the reason for each stay, as specifically as possible, following the same rules as for identification algorithms by primary or related diagnosis. There was an exception: even when it was not the primary reason for the stay, hemophilia was prioritized when it was coded as an associated diagnosis. Indeed, we observed that the expenditures of their hospital stays were substantially higher than those of people who did not have such comorbidity.
* Step 2: complete step 1 with additional, less specific but more sensitive criteria. For example, ICD-10 codes for "Neoplasms of uncertain or unknown behaviour" are not specific enough to identify a cancer in the data, but they do allow a stay to be linked to a cancer identified in an individual based on other criteria. This step only applies to stays that were not linked to any health condition at the conclusion of the first.

The remaining stays at the end of the two steps were attributed to “Hospitalizations for other reasons”.

For example, in 2019, among 26.6 million SSH stays, 13.2 million were attributed to specific health conditions (12.7 million at step 1 and 486 666 at step 2) and 13.5 million to “hospitalizations for other reasons”.

For rehabilitation care, there are 3 possible diagnoses. We defined an order of priority: the etiological condition (similar to the related diagnosis in SSH), then the main disease manifestation (similar to the primary diagnosis in SSH), then the main purpose of care.

Finally, for psychiatry, we used the primary diagnosis of the stay.