Input of longitudinal data in the health information system

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Objective: In Belgium, political and health decision-makers wish to strengthen their knowledge of the population's health status by adding longitudinal data to the national Health Information System (HIS). Indeed an organised system would allow to better follow the changes that individuals experience, to link the complementary information and to better understand the series of events which leads to good or bad health status. This paper provides a breakdown of the elements needed to insert such a longitudinal approach into a HIS.

Methods: This on-going study leans on three complementary pillars: the elaboration of a conceptual framework established on the basis of an international comparative review; the definition of variables useful in a long-term perspective; and the study of the operational aspects with regard to their collection and use.

Results: Despite specific constraints, several strategies can help to build a dynamic approach: the usual carrying out of longitudinal studies, the coupling of data, the establishment of electronic medical records and the implementation of registers. Several health topics and indicators deserve particular long-term attention such as the self-perceived health, some pathologies (asthma, hypertension, diabetes…), the functional health or certain health behaviours (especially tobacco consumption). However international initiatives indicate that the construction of a longitudinal vision implies also the fulfilment of other complex requirements. First of all, concerning the legal background that should balance, on the one hand, the protection of individual rights and, on the other hand, the need to collect data in order to evaluate the performance of the health system and to establish sound public health policies. Then, decisions concerning the configuration of the longitudinal HIS should be taken, that will for instance allocate the tasks, responsibilities and means of the collection, analyse and diffusion of the data; ensure the physical protection of the data; promote the quality of the data as well as the use of a unique health identification code. Relying on those international examples, the Belgian health Authorities, which launched a project of improvement of the national HIS with a longitudinal component, might take advantage of the current implementation of an electronic platform of health data exchanges to achieve their objective.

Conclusion: Applying a longitudinal approach to the health sector would contribute to the development of a nationwide coherent vision of the population's health status, support the sustainability of the health system and would take part in an evidence-based medicine strategy. In addition to the technological investments, this would necessitate some cultural changes in order to facilitate the exchange of data.