

CONFERENCE ABSTRACT

Presenting the status of project SIFT – Research of the patient flows and structures in health and social services in three Finnish cities in 2009–2015

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The date of Finnish health and social services reform is fast approaching. The reform, planned to step into force on 1 January 2020, includes transferring responsibility of these services from municipalities to newly formed, autonomous regions. In addition to coordination, the regions shall form effective service and care chains.

To carry out this task successfully, more information is needed about the critical points of integration of different services. We have for a while been working with a project called SIFT, which focuses on the heavy users of health and social services. We have obtained register-based data from three cities (Lohja, Karkkila, Vihti) in Southern Finland, with a total of approximately 85 000 inhabitants.

Based on this data, we are studying the distribution of services used by those clients that occur in three registers: primary care, secondary care and social services. Interest is laid especially on the service processes. What kind of links are there within and between the health and social services? Are there certain phenomena to be found concerning the combinations, timelines etc? What is the level of health and social care integration before the reform?

The study design is extraordinary in many respects. All sub-sets of data – also the social services sub-set – are large and numerical, allowing a quantitative research approach, as well as an integrated analysis concerning the co-occurrence of different services. Data includes some information on the family members of the clients, which is important from the point of view of child protection and family work services. Furthermore, the time span is relatively long, from the beginning of 2009 to the end of June 2015.

Analysis methods include e.g. decision trees, SOM (a neural network), genetic algorithms, K-nearest neighbours and Markov chains, applied in various steps of the process. Spatial analyses can be carried out based on the postal number of the customers.

It is already clear that the heavy users of health and social services can be classified into groups based on some factors, e.g. the dominant services and frequency of the service use. Certain dependencies can be pointed out in the service processes. Furthermore, spatial differences can be seen even in this relatively small geographical area. Using information of

the family members has also proven to be useful and brings new perspectives into the client processes of social work.

Because of the ambitious aim of combining observations from several branches, there have been plenty of issues related to completeness and internal integrity of the data. The operations situated at the interfaces of health and social services seem to be problematic from the point of view of our data collection.

We do not have access to services given by the private sector. However, the heavy users of the health and social services mainly rely on the public sector in Finnish conditions.

During 2018, a tool will be built, with which a person's probability to become a heavy user of different health and social services can be predicted.

Keywords: heavy users of health and social services; data fusion; predictive model
