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# How sick is Austria? - A decision support framework for different evaluations of the burden of disease within the Austrian population based on different data sources

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## Objectives

In healthcare it is crucial to have a fundamental knowledge of the burden of diseases within the population. Therefore we aimed to develop an Atlas of Epidemiology to gain better insight on the epidemiological situation. Based on primary and secondary health care data, we aimed to present results in interactive charts and maps, comprehensible to experts and the general public. The atlas builds a framework for rapid deployment of new data and results in a reproducible and efficient way. As a first use case three methods based on two different databases for the estimation of diabetes prevalence in Austria are compared.

## Approach

Datasources: (i) reimbursement data 2006/2007 (GAP-DRG); (ii) national routine health survey (ATHIS) for 2006/2007. Methods for diabetes prevalence estimation: 1) ATC-ICD statistically relates pseudonymized data on medications to data on diagnoses from hospitalizations and sick leaves. 2) With the method Experts, medical experts assign specific medications to diabetes diagnoses. Patients with these medications are identified together with hospitalized diabetes diagnosed patients in GAP-DRG. 3) In ATHIS a sample of 15.000 persons was questioned if they a) ever had diabetes and b) were treated against diabetes in the last 12 months. Results are projected onto the Austrian population. Patients are divided by 10-year age-classes, gender and state. For the publicly online framework, implemented in html and javascript, pre-processed data in different granularity is required and used.

## Results

Maps of Austria represent the prevalence of diabetes for each method and granularity level. The difference of the methods can be seen by clicking on the next map. For different age-classes (resp. different gender) the three methods can be compared directly within a bar chart. The technology for a rapid deployment of new data is now developed. For the use case first results have already been presented to decision makers, and feedback has been incorporated.

## Conclusion

Besides depicting disease prevalence, the atlas of epidemiology also allows to visualize health care service data and results of simulation models in a fast and efficient way, which is important for decision makers. Soon the results of the ATC-ICD project on the prevalence of different diseases based on ICD9 diagnoses and medication data will be published in an aggregated form. This project is part of the K-Project dexhelpp in COMET - Competence Centers for Excellent Technologies that is funded by BMVIT, BMWGJ and transacted by FFG.

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