



ACE

ANALYSING CLAIMS & EPIDEMIOLOGY DATA

DATA SOURCES - DATA AVAILABILITY

OPPORTUNITIES FOR STUDY DESIGNS AND ANALYSES

OUR DATA SOURCES

Statutory health insurance is an essential component of the German healthcare system and covers around 89% of the population (approximately 72 million people). The remaining 11% are privately insured. Our data are based on large nationwide statutory health insurance funds which are representative of the German population.



DATA AVAILABILITY

The data include all billing-relevant information in the outpatient and inpatient sectors, including sick leave (work incapacity), outpatient prescriptions, outpatient physician contacts, coded diagnoses, billed services, and quarterly information on physician visits. Information on all prescribed and dispensed drugs is also available, including the prescribing physician's specialty. The data also contain sociodemo-

graphic information on age and sex, place of residence, type of employment (full-time, part-time, mini-job, vocational training), and personal income, permitting regional and subgroup analyses. Finally, a large number of economic data from the perspective of the sick fund are available. All healthcare service data can be linked anonymously at the individual level.

OVERVIEW:

DATA VARIABLES FOR ANALYSES

Sociodemographics	Age Sex Residence Mortality Type Insurance period Education Profession Employment Income	Date of birth (month and year) Female, male Federal state, county (e.g. urban, rural) Date and ICD-10 GM code Of insurance coverage (member, pensioner, family insured) Start and end of insurance coverage Educational status / qualification Occupational group / profession E.g. full-time, part-time, mini-job, vocational training Individual income
Epidemiology	Prevalence Incidence Severity of disease Comorbidity	ICD-10 GM code ICD-10 GM code Inpatient stay due to disease Incapacity to work and sickness benefit Use of systemic drugs ICD-10 GM code for all diseases
Outpatient care	Length Physicians Location of the medical facility Medical aids Special therapies Midwifery services	Duration / number of contacts per quarter E.g. group by medical specialist Practice location / region "Hilfsmittel"; Type and date "Heilmittel"; Type and date Type and date
Prescription drugs	Type Date Treatment Dose metric	Active substance (Anatomical Therapeutic Chemical code (ATC)) Generic Product Identifier Of prescription Of drug dispensing at the pharmacy Uniform assessment standard (EBM) Defined Daily Dose (DDD)
Inpatient care	Length Type Treatment Referring physician Specialist department Location of the medical facility	Stay in days Of stay (inpatient, pre-inpatient, post-inpatient, semi-inpatient) Operation and Procedure Code (OPS) Diagnosis Related Groups (DRG) Specialty Hospital department / specialty ward Hospital location / region
Outpatient hospital care	Length Treatment Specialist group Location of the medical facility	Duration / number of contacts Operation and Procedure Code (OPS) Uniform Assessment Standard (EBM) Hospital outpatient specialist group Hospital location / region
Nursing care	Level of care Type Location of the medical facility	Incl. date Of nursing care service Facility location / care setting / region
Incapacity for work	Days off work Reason	Number of days off work ICD-10 GM code
Rehabilitation	Type Length Location of the medical facility	Of nursing care service (e.g. rehabilitation treatment, preventive treatment (inpatient or outpatient)) Stay in days Facility location / region
Dental care	Type Date Location of the medical facility	Of dental care / treatment (e.g. periodontal disease, conservative surgical dental treatment) Of treatment Facility location / dental practice / region
Cost of illness	Direct costs Indirect costs	Healthcare expenditures Productivity losses

POTENTIAL STUDY DESIGNS

- Cross-sectional studies covering German health care from 2010 to 2024
- Longitudinal cohort studies over a defined follow-up period (e.g. 2018–2022)
- Case-control studies with defined disease cases
- Self-controlled and quasi-experimental as well as machine learning approaches

AND ANALYTICAL OPTIONS

- Epidemiology: Examining disease occurrence, prevalence and incidence by age, sex, and region, as well as comorbidity rates
- Drug research: Analysing drug utilization, prescribing behaviour, and quality of care
- Predictive analysis: Modelling time-to-event outcomes and identifying key predictors of care
- Comparative analysis: Comparing groups to evaluate healthcare interventions or outcomes
- Data-driven adjusted comparisons: Examining adjusted group differences using methods such as target trial emulation and propensity score matching
- Health economics: Analysing the cost of illness, resource utilization, and medical costs
- Treatment and care patterns: Investigating patient pathways and treatment choices

CONTACT US

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