**Comparing quality of care with administrative or registry data? QS-AMI Project for assessing quality of hospital care of patients with acute myocardial infarction in Berlin**

**Authors**: B. Maier, S. Behrens, L. Bruch, R. Busse, D. Schmidt, H. Schühlen, R. Thieme, H. Theres

**Background**
Assessing quality of health care on the basis of administrative data is becoming a common approach in German health care policy despite studies missing that have evaluated the validity of using these data for the purpose of quality assurance. Therefore we have initiated the QS-AMI project in which data routinely collected for reimbursement purposes by one of the biggest german sickness funds (AOK Nordost) are compared to data collected by a clinical quality registry (Berlin Myocardial Infarction Registry - BMIR) for patients with acute myocardial infarction (AMI).

**Methods**
All AMI patients treated in 20 Berlin hospital between 2009-11 from the AOK and BMIR data sets were included and both pseudonymized data sets were analysed separately first. Using key variables (patients' sex, age, and day and time of hospital admission) data were linked and those patients considered being the same patient in both data sets were identified. The level of agreement between the variables collected in both data sets for patients identified as being the same was calculated using the cappa coefficient (CC).

**Results**
7738 AMI patients were enclosed from AOK and 9297 from BMIR. In a first descriptive analysis both data sets showed many differences: AOK patients were older, more often women, received PCI less often und died more often in the hospital. Through linkage we were able to identify 2558 patients, considered to be identical in AOK and BHIR. This was about 80% of the assumed possible overlap with the following results:
AOK and BMIR data are comparable for coding of STEMI vs. NSTEMI (CC: 0,824), for aspects important for reimbursement i.e. procedures like PCI (CC: 0,860), or relevant secondary diagnoses, i.e. Diabetes (CC: 0,814), or for hard outcome parameters, i.e. hospital mortality (CC: 0,915). AOK and BMIR data are not comparable for coding of risk factors or secondary diagnoses not important for reimbursement, i.e. smoking (CC: 0,394). AOK data have only a limited capacity to summarize patients history, i.e. previous AMI (CC: 0,004). AOK data cannot differentiate between „present on admission" and „during hospital stay", which leads to more patients being diagnosed with i.e. CHF in the AOK data set compared to the BMIR (CC: 0,212).

**Conclusion**
The AOK data set can give an overview of existing structures, processes (i.e. PCI), and hospital mortality. The BMIR can provide additional data on risk factors, secondary diagnoses and patients' history necessary for adjusting for hospital mortality.