Arthroplasty register for Germany
Gorenoi V, Schönemark MP, Hagen A

Scientific background
The annual number of joint replacement operations in Germany is high. The introduction of an arthroplasty register promises an important contribution to the improvement of the quality of patient's care.

Research questions
The presented report addresses the questions on organization and functioning, benefits and cost-benefits as well as on legal, ethical and social aspects of the arthroplasty registers.

Methods
A systematic literature search was conducted in September 2008 in the medical databases MEDLINE, EMBASE etc. and was complemented with a hand search. Documents describing arthroplasty registers and/or their relevance as well as papers on legal, ethical and social aspects of such registers were included in the evaluation. The most important information was extracted and analysed.

Results
Data concerning 30 arthroplasty registers in 19 countries as well as one international arthroplasty register were identified. Most of the arthroplasty registers are maintained by national orthopedic societies, others by health authorities or by their cooperation. Mostly, registries are financially supported by governments and rarely by other sources. The participation of the orthopedists in the data collection process of the arthroplasty registry is voluntary in most countries. The consent of the patients is usually required. The unique patient identification is ensured in nearly all registers. Each data set consists of patient and clinic identification numbers, data on diagnosis, the performed intervention, the operation date and implanted prostheses. The use of clinical scores, patient-reported questionnaires and radiological documentation is rare. Methods for data documentation and transfer are paper form, electronic entry as well as scanning of the data using bar codes. The data are mostly being checked for their completeness and validity. Most registers offer results of the data evaluation to the treating orthopedists and/or hospitals, provide annual reports and publish scientific articles and/or presentations. The effects of the arthroplasty registers on clinical practice and on health political decisions in the time after the introduction of these registers are documented in some countries. The influence on cost savings for health services is also reported.

Discussion
The most important legal and ethical aspect is the patient’s data protection and, therefore, the requirement of patient’s consent. The involvement of the
physicians in the data collection process is a further organisational and legal challenge. The 100 % data collection, which is the aim of the registers due to their definition, should not cause disadvantages for certain groups of patients.

**Conclusion**

The arthroplasty registers have a large medical and health-economic potential. Aspects of the patient’s data protection and the guaranteed financial support of the registers should be clarified before the introduction of a register.