

## Outcome of the cementless Taperloc stem: a comprehensive literature review including arthroplasty register data

Gerold Labek, Stefan Frischhut, Rainer Schlichtherle-Pohle, Alexandra Williams & Martin Thaler

### BACKGROUND AND PURPOSE

The validity of various data sources for the assessment of the outcome quality of medical devices was investigated by comparative analysis of the published data sources available for a sample of implants. It was the aim of the study to determine the performance of this implant and to identify potential bias factors inherent to the various datasets.

### METHODS

A comprehensive literature search was carried out from English-language, peer-reviewed journals and worldwide reports from national arthroplasty registers. Publications from Medline-listed journals were included. The main parameter was revision rate, calculated as "revisions per 100 observed component years" to allow adjusted direct comparison of different datasets.

### RESULTS

Of 16 clinical studies that met the inclusion criteria, 9 originated from the implant developer's hospital. In the clinical studies category, publications from the developer's hospital suggested considerably lower revision rates than the other datasets. In fact, the values quoted were 5.5 times below the average of all other studies, and 9.51 times lower than in the Australian arthroplasty register. These differences are statistically significant.

### INTERPRETATION

The cementless Taperloc stem is an implant that shows good performance regarding revision rates in registry data and in clinical studies. However, the excellent results published by the developer's clinic are generally not reproducible by other surgeons. In terms of reference data, registry data are able to make an important contribution to the assessment of clinical sample-based studies, particularly regarding evaluation of the extent to which published results are reproducible in daily routine.

Kantonsspital  
St.Gallen



<b>type</b>	journal paper/review (English)
<b>date of publishing</b>	4-2011
<b>journal title</b>	Acta Orthop (82/2)
<b>ISSN electronic</b>	1745-3682
<b>pages</b>	143-8