

**Economic Evaluation using Observational Data: A Scoping Review**

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**Objective:** Published economic evaluations and cost analysis of rheumatoid arthritis (RA) drugs are usually performed using Randomized Trial data with few studies conducting economic evaluation using observational or registry data. As a result, most existing evidence surrounding economic analysis do not account for a long-term time horizon, downstream costs to the health-care system and work productivity losses that are needed to capture the true costs of RA treatments. We thus sought to provide a scoping review of the existing literature on economic analysis using observational or administrative data including cost-effectiveness, cost-utility and cost-analysis in RA to identify existing research, gaps in research and future directions.

**Methods:** English language articles from 1964 to October 2013 were searched in Ovid (Medline) and Embase. Exclusion Criteria: Articles not available in electronic form, conference abstracts, meeting summaries, and letters. MeSH terms: Rheumatoid arthritis, compensation and redress, costs and cost analysis, economics, medical economics, pharmaceutical economics, fees and charges, health care sector, health care costs, cohort studies, longitudinal studies, registries, cost-benefit analysis, postmarketing product surveillance, biological agents, anti-inflammatory agents, non-steroidal, antirheumatic agents. NonMeSH terms: Systematic review, economic evaluation, economic analysis, administrative data, biologics. Individual search terms were then combined strategically using the “and” operator.

**Results:** The original search yielded 3505258 citations without removing duplicates. The search was narrowed using combined search terms to 6024 citations. After removal of duplicates 767 citations remained, which were screened by title down to 167 citations, which were reviewed by abstract. 20 articles were selected for full review.

**Conclusion:** Gaps in full economic evaluation using observational or registry data exist in current literature. Cost-analysis evaluating the downstream costs, health care utilization and productivity losses were more common than full-fledged economic evaluation using observational data. Future research to address the shortcoming of observational or registry based economic evaluation is warranted to address the knowledge gap identified in our scoping review.