

**Economic evaluation of glucosamine sulfate (DONA®) for  
the treatment of osteoarthritis in the Irish Healthcare setting**



**National Centre for Pharmacoeconomics**

**June 2009**

## **Economic evaluation of glucosamine sulfate (DONA) for the treatment of osteoarthritis in the Irish healthcare setting**

### **Summary:**

1. The cost-effectiveness of glucosamine sulfate (DONA) for the treatment of osteoarthritis was reviewed following the submission of a pharmacoeconomic evaluation on the 20<sup>th</sup> January 2009 by Rottapharm Ltd. Following the initial evaluation the manufacturer submitted a revised document on the 15<sup>th</sup> May 2009.
2. The submission evaluates the cost-effectiveness of glucosamine sulfate 1500mg once a day as compared with placebo and paracetamol for the treatment of osteoarthritis of the knee. The study was undertaken from the perspective of the Health Service Executive (HSE).
3. The economic evaluation was based on the publication by Herrero-Beaumont et al. (2007) which was a randomised, double blind placebo controlled study using acetaminophen (paracetamol) as a side comparator. Following a review of the current literature in addition to the pharmacoeconomic submission the review group questioned the efficacy of glucosamine for the treatment of osteoarthritis.
4. The incremental cost-effectiveness ratio (ICER) for glucosamine sulfate versus placebo was €6,154/QALY. When compliance was considered this ICER was €5,296/QALY. The ICER for glucosamine sulfate versus paracetamol at minimum price was €1,590/QALY with the corresponding value when compliance was taken into consideration being €30,857/QALY.
5. The review group considered that a degree of uncertainty arose in relation to the estimation of utility values incorporated into the cost utility analysis. It was appreciated that the use of mapping techniques, as in the current submission, whilst being acceptable are a source of uncertainty.
6. The relatively high incremental cost-effectiveness ratio values for glucosamine sulfate versus placebo and paracetamol in addition to the degree of uncertainty surrounding the utility estimates were a cause of concern. We do not believe that glucosamine sulfate (DONA) is a cost effective therapy for the treatment of osteoarthritis in the Irish healthcare setting. The pricing and reimbursement of this product under the Community Drugs Schemes should be reconsidered.