

Economic evaluation in health: Cost-utility of the incorporation of total knee replacement to the Chilean Explicit Health-Guarantees regime

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Abstract

Background

Osteoarthritis is an important health condition due to its prevalence and functional deterioration, being the most common cause of disability in people over 65 years of age. The Chilean Explicit Health-Guarantees regime provides coverage for medical treatment in mild and moderate presentations, excluding surgical treatment in end-stage knee osteoarthritis.

Objectives

To evaluate the cost-utility of incorporating total knee replacement to the Explicit Health-Guarantees regime for over-65-years beneficiaries of the public insurance system, versus maintenance with medical treatment.

Methods

A Scoping review was conducted to identify model parameters and economic evaluation based in a 6 health states Markov Model, from the perspective of the public payer and lifetime horizon. The Incremental Cost-Utility Ratio (ICUR) was calculated, and deterministic and probabilistic uncertainty analysis were performed.

Results

Twenty-two articles were selected as reference sources. If the regime were to adopt the procedure, the implication would be a benefit of 9.8 Years of Life Adjusted by Quality (QALY) versus 2.4 QALY in the scenario without access to total knee replacement. The ICUR was \$ -445 689 CLP/QALY (USD - 633.8/QALY), wherein the inclusion of total knee replacement to the regime becomes a dominant alternative versus the current scenario. Each quality-adjusted life-year gained by the surgery will save CLP 445 689. At a willingness to pay of CLP 502,596/QALY (USD 714.7/QALY), access to surgery is

cost-useful with a 99.9% certainty.

Conclusion

Total knee replacement in patients older than 65 years is a dominant alternative. Access to this procedure in the Chilean Explicit Health-Guarantees regime in the public system is cost-useful at a threshold of 1 GDP per capita.

Palabras clave

Palabras clave de autor:[Total Knee Replacement](#); [Cost-Utility Analysis](#); [Knee Osteoarthritis](#)

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Editorial

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