

## **COST OF MAINTENANCE HEMODIALYSIS IN TAIWAN: ESTIMATION OF LOSS OF HEALTHY LIFE EXPECTANCY AND FINANCIAL BURDEN TO THE NATIONAL HEALTH INSURANCE**

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**BACKGROUND:** The objective of this study was to determine the cost of maintenance hemodialysis (MHD), including loss of healthy life expectancy and lifetime financial burden to the NHI (National Health Insurance) in Taiwan.

**METHODS:** Survival data were collected from 746 consecutive patients on MHD in Keelung-ChangGung Memorial Hospital from 1996 to 2003. The health expenditure data were collected from reimbursement file of National Health Insurance (NHI) in 2002 and 2003. The survival function was estimated and extrapolated throughout lifetime based on logit transform of survival ratio between the patients' cohort and age- and gender-matched general population from vital statistics. The quality-of-life (QOL) data of MHD patients were measured by standard gamble (SG) and rating scale (RS) methods, which were integrated with survival to estimate quality-adjusted life expectancy (QALE). The QOL of the general population was assumed as one.

**RESULTS:** The results showed that life expectancy in MHD patients was 141.3±27.1 months (mean±standard deviation) with an expected loss of 111 months. After adjusting for QOL, the QALE were 113.3±19.8 and 80.2±15.7 quality-adjusted life months, respectively, for SG and RS measurements, while those of loss of healthy life expectancy were 139.6±19.8 and 172.3 ±15.7 months, respectively. Estimated lifetime financial burden for a case of MHD were 143,307 and 144,715 USD in 2002 and 2003, respectively.

**DISCUSSION/CONCLUSIONS:** The estimation based on extrapolation of survival and integration with QOL can be used as benchmark values for comparative outcome evaluation of health services and clinical decision-making in the future.

**Key word:** quality-adjusted survival, cost, maintenance hemodialysis, quality-adjusted life expectancy.