CONJOINT ANALYSIS OF REDUCTION OF CO-PAYMENT RATE OF NATIONAL HEALTH INSURANCE SYSTEM IN JAPAN

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BACKGROUND

In Japanese national health insurance system, there is some limit for monthly co-payment amount. For patients with ordinal income, if monthly co-payment exceed around JPY80,000, co-payment rate will be reduced from 30% to 1%. In addition, those who suffer from AIDS, chronic renal failure with dialysis and haemophilia, can take lower co-payment limit, such as JPY10,000 per month. Patient groups for myeloma, cervical cancer, hepatitis, chronic myelogenous leukemia and rheumatoid arthritis argued that co-payment reduction should be implemented to their diseases.

OBJECTIVE

To conduct conjoint analysis to determine how people value various factors of diseases in decision-making process for co-payment reduction.

METHODS

We determined six factors, i.e., influence for life years / QOL (low / high), availability for medicines (yes / no), number of patients (5,000 / 50,000 / 500,000), disease duration (short / long) and out-of-pocket expense per 1 month (JPY10,000 / JPY100,000, USD1=JPY90) and developed questionnaire. 96 patterns are reduced to 26, via orthogonal methods. 1,163 participants filled questionnaire via web survey system. We adopted panel-logit model to estimate odds ratios for each factors. Analyses were done with PASW statistics® and STATA®.

Survey process

All of those who took part in the survey would see instruction page, with following introductions;

Recently, ordinal co-payment rate for health insurance systems is set to 30%. However for several special diseases, various regulation systems are implemented to lower co-payment amount, such as decreasing co-payment rate or lowering for monthly co-payment amount.

You (participant) will see different 14 patterns of 5 characteristics of certain disease;

Influence for life expectancy (low / high)
Influence for quality of life (low / high)
Availability for effective medicines (yes / no)
Number of patients (5,000 / 50,000 / 500,000)
Duration of disease (short / long)
Out-of-pocket expense per 1 month (JPY10,000 / JPY100,000)

For each patterns, answer your preference, whether or not out-of-pocket expense should be lowered than base-case (JPY10,000 or 100,000 per month) in such disease. They mentioned their preference for different 14 patterns, generated randomly from 26 patterns.

RESULTS

All 6 factors significantly influenced peoples' decision-making process. Coefficient for each factors were as follows; out-of-pocket expense: 2.61 > influence for QOL: 0.976 > disease duration: 0.884 > influence for life years: 0.831 > number of patients: 0.105 > availability for medicines: -0.18, respectively. Based on this estimation, when we consider characteristics of anti-rheumatoid biologics, more than 95% people think that out-of-pocket rate should be reduced.

Various factors contribute to people's attitude for co-payment reduction. This quantitative result would be helpful for decision-making process in national health insurance system.

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