

613 reading note 2

Tian Chen

February 24, 2022

1 Introduction

In this paper, the authors use both the micro-theoretical model and regression to analyze the welfare for three insurance policies: full-coverage, no top-up, and top-up. As a case study, this paper focuses on breast cancer treatments. It provides a simple framework for the demand curve estimation and shows that the top-up policy improves the social welfare by \$700-2,500 per patient compared to the other two policies.

2 Body

Inspired by the US's increasing and expensive medical expenditures, the paper aims to figure out the most cost-efficient insurance policy. This paper discusses full-cover insurance, no-top-up insurance, and top-up insurance. Full-cover insurance is the most common-used insurance policy in the US, in which the contract covers all expenditure of medical treatments. Unlike the full-cover contract, the no-top-up contract forces the patients to choose the most cost-efficient treatment and does not cover more expensive alternatives. The top-up policy is in between the above two policies. In the top-up policy, the contract covers the baseline treatment, but it will allow the individuals to choose more expensive treatments if they pay incremental costs.

To quantitatively compare the welfare of each policy, the paper adopts the administrative cancer registry data from California Cancer Registry (CCR) and focuses on the patients with breast cancers. There are two breast cancer treatment choices: lumpectomies and mastectomies with radiation therapy. Though the lumpectomies are less costly, the clinical trials suggest no detectable difference in survival outcomes. Full-coverage insurance allows the patients to choose either one. In contrast to full-coverage insurance, no-top-up insurance covers the less expensive lumpectomies. Patients can choose the mastectomies with top-up contracts by paying additional costs.

In the empirical section, the authors first provide the simple framework of the demand curve of lumpectomy relative to the mastectomy. The top-up policy will internalize the marginal costs. The utility function contains the patient-specific preference parameters, the opportunity cost of time, and the

price. The preliminary basic logit regression also shows that the probability of choosing lumpectomy is negatively associated with the distance from home to radiation facilities. The second part of the empirical section focuses on the ex-post welfare analysis of different insurance policies. In the second part, the authors use the administrative data and the framework to estimate the demand curve and analyze different insurance policy welfare effects. The results imply that the no-top-up policy reduces the lumpectomy rate with massive welfare. Simultaneously, the full-coverage insurance increases the lumpectomy rate with welfare cost. In contrast to the above two policies, the top-up leads to more efficient results.

3 Conclusion

In conclusion, this paper uses the case study of breast cancer treatment to analyze the welfare effects of different insurance policies. It shows that the top-up policy, which covers baseline treatment but allows individuals to choose more expensive treatment by paying incremental costs, is more likely to generate higher welfare. From this perspective, the paper has significant policy implementation for the national insurance policy reform

However, the paper's framework includes only the travel costs as an external parameter. The results will be more convincing if the authors include other external factors such as the local medical treatment level into the model. Moreover, the regression model in this paper is preliminary. In the future study, more advanced analysis tools such as Difference in Difference with natural experiments or Randomized Control Trials can provide more supportive evidence to the argument of this paper.