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研究課題名(和文) The effect of 2006 Long-term Care Insurance Amendment on Cost Containment: an empirical evidence from nationally representative claims data

研究課題名(英文) The effect of 2006 Long-term Care Insurance Amendment on Cost Containment: an empirical evidence from nationally representative claims data

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研究成果の概要(和文)：We find that a ten-percentage-point reduction in the copayment rate increases monthly costs by 10.2 thousand yen, corresponding to a price elasticity of about -0.1. Insured individuals with no copayments tend to use more services and have more utilization days than those with copayments do.

研究成果の学術的意義や社会的意義

Fiscal sustainability is the greatest concern faced by Japan's LTCl. We verify the possibility of cost-sharing adjustments as one solution. Our findings may have broad implications for the rapidly aging world by providing valuable evidence for governments planning to launch public LTCl.

研究成果の概要(英文)：We evaluate the presence and magnitude of moral hazard in Japan's public long-term care insurance (LTCl) market. Using monthly LTCl claim records from January 2006 to December 2015 linked to concurrent death records, we construct a sample by propensity score matching insured individuals who copay 10% of their fees to those with no required copayments, and we implement fixed-effect estimations. We find that a ten-percentage-point reduction in the copayment rate increases monthly costs by 10.2 thousand yen, corresponding to a price elasticity of about -0.1. Insured individuals with no copayments tend to use more services and have more utilization days than those with copayments do.

研究分野：Health Economics

キーワード：Long-term Care Insurance Moral Hazard

1 . 研究開始当初の背景

Last decades have seen a drastic increase in demand for long-term care (LTC) in the super-aged Japan. To satisfy the LTC demand that resulted in an overuse of medical services (e.g., the so-called “social hospitalization” phenomenon), a stand-alone and dedicated LTC insurance (LTCI) was launched in 2000. The system became popularized rapidly among seniors and successfully released their family caregivers from long hours of commitment for daily caregiving. On the down-side, the public expenditures for the LTCI raised substantially. During its first five years, the LTCI total costs increased 174% to 6.3 trillion yen. Worse still, the costs per recipient aged 65 and older (65+) raised 153% to 247.0 thousand yen. The system, indeed, faced a great challenge on fiscal sustainability from a long-run vision.

As a response, the government announced a major amendment in 2006. It intended to lock the costs escalation by reducing recipients’ economic incentives to overuses LTC services (e.g., request for room expenses to institutionalized recipients), and by dampening supplier-induced demands (e.g., more control over types of services provided) (Kikuchi et al., 2006; Tsutsui and Muramatsu, 2007). Instant effect was significant: the costs per recipient 65+ were successfully cut down to 229.7 thousand yen and the total costs were stabilized at 6.30 trillion yen in 2006. In a long-run perspective, unfortunately, the amendment has not worked as expected. During years after the amendment, both the total costs and the costs per recipient 65+ continuously increased. The latest 2014 statistics revealed that they have respectively soared to 9.25 trillion yen and 280.3 thousand yen, whereas no signal implied this escalation would be alleviated.

Why the 2006 amendment, although attempted to contain the LTC costs by properly regulating both the consumers and suppliers in the LTC market, failed to tackle the issue? Empirical evidences are required to reveal justifications behind the skyrocketing costs of the Japanese LTCI system. However, partly due to limited accessibilities to nationally representative datasets at individual level, literature focuses exclusively on costs simulations using aggregated datasets (Ohta and Nakazawa, 2013). On the other side, there are still lack of evidences to assess the extent

to which the 2006 amendment has achieved to contain the costs by properly regulating the LTC market operations.

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2 . 研究の目的

This research project, accordingly, aims to assess the 2006 LTCI amendment in terms of the extent to which it regulated the overuses of LTC services caused by recipients and induced by suppliers. We focus on a dataset of eight-year nationally representative administrative records – the monthly claims for reimbursement of LTC services utilization.

3 . 研究の方法

The research is conducted in two aspects. First, we aim to define and derive a basic measure for our investigations: the lifetime costs of LTC services utilization, which is the accumulated monthly LTC costs of a recipient from the date of his/her enrollment to the date of his/her death, respectively for all recipients. We are the first in Japan deriving a measure of LTC costs at individual level from a lifelong perspective, and a decrease/increase of this measure works an indicator to evaluate the 2006 amendment.

Second, we seek to investigate a potential

moral hazard issue in the ongoing LTC market. Put differently, we aim to confirm whether the LTCI recipients who tend to overuse the services have higher lifetime LTC costs. This moral hazard issue results from the legislative age for LTCI enrollment (age of 65 years). As the enrollment opens to all Japanese 65+, seniors are motivated to become enrolled and to utilize the services as soon as they become 65, regardless of their real care needs. Literature on information asymmetry in LTC market finds that people at higher health risk have stronger motivations to use LTC services (Finkelstein and McGarry, 2006). Japanese scholars also described the mechanism of moral hazard in Japanese LTC market (Yoshida, 2007). Our study would provide concrete empirical evidences for the preceding discussions.

4 . 研究成果

We find that a ten-percentage-point reduction in the copayment rate increases monthly costs by 10.2 thousand yen, corresponding to a price elasticity of about -0.1 . Insured individuals with no copayments tend to use more services and have more utilization days than those with copayments do. Furthermore, we find that insured individuals who die from cerebral (myocardial) infarction increase their service use more in response to a reduction in the copayment rate than those who die from senility do, indicating a positive association between ex-ante health risks and ex-post service use. We verify that a cost-sharing adjustment is a valid solution for soaring LTCI expenditures. These findings could provide broad implications for the rapidly aging world.

We evaluate a spillover effect of the Japanese public long-term care insurance (LTCI) as a policy to stimulate family caregivers' labor force participation. Using nationally representative data from 1995 to 2013, we apply difference-in-difference propensity score matching to investigate the spillover effect in two periods: before and after the introduction of the LTCI in 2000 and before and after its major amendment in 2006. Our results show that the LTCI introduction has significant and positive spillover effects on family caregivers' labor force participation and the effects vary by gender and age. In contrast, the LTCI amendment is found to have

generally negative spillover effects on their labor force participation. We draw attention to these spillover effects, as expanding labor market supply to sustain the economy would be a priority for Japan and other rapidly aging countries in the coming decades.

5 . 主な発表論文等

〔雑誌論文〕(計2件)

1. Fu, R., Noguchi, H. (2019). Moral Hazard under Zero Price Policy: Evidence from Japanese Long-term Care Claims Data. *The European Journal of Health Economics*. Peer Reviewed. doi.org/10.1007/s10198-019-01041-6
2. Fu, R., Noguchi, H., Kawamura, A., Takahashi, H., Taymiya, N. (2017). Spillover Effect of Japanese Long-Term Care Insurance as an Employment Promotion Policy for Family Caregivers. *Journal of Health Economics*, 56, 103-112. Peer Reviewed. doi.org/10.1016/j.jhealeco.2017.09.011

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7. Fu, R. 日本医療経済学会第11回研究大会, "Spillover Effect of Japanese Long-Term Care Insurance as an Employment Promotion Policy for Caregivers ", 2016年9月, 早稲田大学

〔図書〕(計0件)

〔産業財産権〕

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取得年：
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ホームページ等

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