

令和 6 年 6 月 13 日現在

機関番号：33102

研究種目：若手研究

研究期間：2019～2023

課題番号：19K13700

研究課題名(和文) How does health insurance copayment affect the use of medical services and health outcomes

研究課題名(英文) How does health insurance copayment affect the use of medical services and health outcomes

研究代表者

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交付決定額(研究期間全体)：(直接経費) 2,100,000円

研究成果の概要(和文)：日本の高齢者を対象に、2013年と2016年の国民生活基礎調査データを用いて、健康保険の自己負担が健康行動や医療利用に与える影響を探究しました。自己負担の増加は健康行動の採用を促進する一方で、タバコの消費は減少し、特に学歴の高い男性においてアルコール摂取が増加することが明らかになりました。これはアルコールの社会的健康効果に関する文化的信念に起因する可能性があります。また、学歴の高さが健康行動の変化を強調し、社会経済的要因の重要性を示唆しています。研究結果は、証拠に基づく政策立案者に有益な示唆を提供し、健康政策変更による負の健康結果の軽減と健康な老化の促進を目指す取り組みに役立つものです。

研究成果の学術的意義や社会的意義

This study advances understanding of how health insurance affects health behaviours. The study provides insights into behavioral responses to financial incentives in healthcare. Moreover, the findings support policymakers aiming to design evidence-based health policies for aging population.

研究成果の概要(英文)：The study explores how health insurance copayments influence health behaviours and healthcare use among older adults in Japan, using data from the Comprehensive Survey of Living Conditions in 2013 and 2016. The findings show that increasing copayments, indicative of reduced insurance coverage, leads to greater adoption of positive health behaviors. Conversely, there is a mixed impact on risky behaviors - while cigarette consumption decreases, alcohol intake rises, especially among educated individuals and males, possibly due to cultural beliefs about alcohol's health benefits in social contexts. Higher education levels amplify changes in health behaviors, indicating the importance of socioeconomic influences. The findings offer valuable evidence-based insights for policymakers aimed at promoting healthy aging and mitigating adverse health outcomes associated with changes in health policy, both in Japan and potentially in other similar contexts globally.

研究分野：Health Economics

キーワード：Copayment Health Insurance Health Behaviours Older Adults Japan

様式 C - 19、F - 19 - 1 (共通)

1. 研究開始当初の背景

Health care expenditure in Japan has been escalating at a significant rate, presenting substantial fiscal challenges. Between 2010 and 2015, the National Medical Care Expenditure surged by approximately 13%, increasing from ¥37.4 trillion to ¥42.4 trillion. This rise in expenditure is closely linked to Japan's aging population. As of 2015, individuals aged 80 years or older comprised nearly 8% of the population, a figure projected to reach 15% by 2050. Additionally, in 2008, while the elderly aged 65 or above represented 22% of the population, they accounted for 54.6% of the total health care expenditure. Such trends indicate that a substantial proportion of medical costs is driven by the needs of the elderly.

In response to the growing financial burden of health care, the Japanese government has explored various measures to manage expenditure, one of which involves modifying the insurance copayment rates. A copayment is the portion of the medical bill that patients are required to pay out-of-pocket, with the remainder covered by their insurance provider up to a specified limit. While increasing the copayment can help curb excessive health care utilization and mitigate moral hazard, it also risks limiting access to essential medical services for some patients. This trade-off is especially pertinent for the elderly, who typically have higher medical needs and may be more sensitive to changes in out-of-pocket costs.

Health behaviours like physical activity, diet, and preventive health measures are crucial for promoting health and preventing chronic diseases among older adults. However, the influence of health insurance coverage on these behaviors is a contentious issue. Grossman's demand for health model offers a theoretical framework that explains how changes in health insurance copayments can impact health behaviors. According to this model, individuals make rational decisions about their health investments, considering factors like health capital, time, and financial resources. When copayments for health insurance increase, individuals may have less disposable income available for healthcare expenditures. This could lead to reduced use of healthcare services and a shift towards lower-cost alternatives, while also promoting healthy behaviours and reducing risky behaviours to maintain their desired health status. These effects are particularly relevant for older adults, who typically have lower incomes and higher time costs compared to younger individuals.

Research on the effects of health insurance copayments on health behaviors has produced mixed findings. Some studies suggest that higher insurance coverage might lead to moral hazard, where individuals engage less in preventive measures and more in risky behaviors due to reduced financial constraints. Conversely, other studies indicate that health insurance can encourage greater engagement in healthcare services and promote healthier behaviors among individuals. These divergent outcomes indicate the complexity of how health insurance policies influence individual behaviours related to health maintenance and disease prevention.

Japan's health insurance system is characterized by universal coverage, providing all citizens with access to medical services through various insurers. These insurers offer patients the flexibility to choose their health care providers and manage costs through a copayment system. The copayment rate, a fixed percentage of the medical bill, varies based on factors such as age and employment status but remains uniform within the same demographic category. In April 2014, a significant policy reform was implemented, increasing the copayment rate for individuals aged 70 to 74 from 10% to 20%. This change represents an exogenous policy intervention, providing a unique opportunity to study its impact on health care utilization and outcomes among the elderly population. This research investigates the broader implications of the copayment increase on the health behaviours and general health conditions among the elderly. The insights from this study enhance the understanding of the effectiveness of the government policy change, offering evidence on how alterations in copayment structures affect health behaviours and the use of healthcare services in an aging population.

2 . 研究の目的

This study aims to investigate the effects of increased health insurance copayment on the health behaviours and healthcare use of elderly individuals aged 70 to 74 in Japan. With the Japanese health insurance reform that raised the copayment from 10% to 20% for this age group, the study seeks to understand how such a policy change influences the utilization of healthcare services and health behaviours. This research contributes to a comprehensive understanding of the intricate relationship between health insurance copayment and health behaviours among older adults in the context of Japan's rapidly aging society.

The study pursues several key objectives to achieve this aim. First, it examines how the increase in copayment affects the utilization of healthcare services among elderly individuals. This involves analyzing changes in the rates of hospital admissions. The analysis aims to identify whether the increased copayment leads to any substitution effects, such as a shift from inpatient to outpatient care or from specialist services to primary care.

In addition to healthcare utilization, the study evaluates the impact of the increased copayment on health behaviours among the elderly. By investigating changes in behaviours such as regular meal consumption, balanced diet, sleep patterns, physical exercise, smoking, and alcohol consumption, the research seeks to determine how copayment influences lifestyle choices that are critical for preventing chronic diseases and promoting overall health. The study also explores the interaction between copayment changes and socio-demographic factors, including gender and education, to assess how these variables mediate the effects on health behaviours and outcomes.

Finally, by understanding how increased copayment affects health behaviours and healthcare use, this research seeks to inform future health policy decisions regarding cost-sharing mechanisms. The findings are expected to offer evidence-based guidance on designing health insurance policies that support healthy aging while managing healthcare costs effectively.

3 . 研究の方法

Japan's health insurance system provides comprehensive coverage for citizens and long-term residents, encompassing medical procedures, dental care, and pharmaceuticals under a national fee schedule. The copayment structure for medical services in Japan primarily varies based on age. Notably, distinct copayment rates apply to individuals depending on their age. In 2014, revisions were introduced concerning the percentage of medical expenses covered among older adults, presenting an opportune scenario for leveraging natural experiments to analyze the causal influence of health insurance copayment on health outcomes stemming from these policy differentials.

This study utilizes Japan's Comprehensive Survey of Living Conditions (CSLC) data in 2013 and 2016 to investigate the impact of the 2014 health insurance copayment increase on individuals aged 70-74. The CSLC samples were drawn from over 5,400 stratified regions across Japan, encompassing 295,367 households in 2013 and 289,700 households in 2016. The dataset provides detailed demographic and health status information, facilitating focused analysis of individuals aged 70-74 and 65-69 across both survey periods.

The empirical approach hinges on leveraging the 2014 revisions to Japan's health insurance copayment system as a natural experiment. Starting from April 2014, the copayment rate for healthcare services increased from 10% to 20% for low-income individuals within the 70-74 age bracket, while those aged 65-69 continued to face a 30% copayment rate. The study examines how these policy changes influenced health outcomes among this demographic cohort, utilizing the difference-in-differences (DID) method. The treatment group comprises individuals aged 70-74 years who were directly affected by the policy change, experiencing the higher copayment rate of 20% in 2016 compared to the same age cohort who had the lower copayment rate of 10% in 2013. Conversely, the control group consists of individuals aged 65-69 years during the same period, who did not undergo any changes in copayment rates. This group serves as a comparison against the treatment group, allowing researchers to isolate the effects of age-specific copayment adjustments from other potential factors influencing health

behaviours.

As the policy change affects low-income individuals only, the study strategically excludes observations from full-time workers, approximating the low-income group affected by the copayment increase. This methodological choice aims to enhance the precision of estimating the policy's effects on targeted demographics. Control variables such as gender, marital status, and education level are included to further refine the analysis and account for potential confounding factors.

Additionally, the study tested the parallel trend assumption to validate the use of DID estimation. Using data from the 2010 CSLC survey as a pre-intervention baseline, the study focused on smoking behaviors due to questionnaire variations across survey waves. The parallel trend analysis provided confidence that observed differences post-intervention were attributable to copayment changes rather than pre-existing group disparities.

Furthermore, the study explored heterogeneous effects by conducting subsample analyses based on education levels and gender differences. This analysis aimed to understand how varying levels of health literacy and human capital influenced responses to copayment increases. Similarly, gender-based analyses were conducted to discern differential impacts of copayment changes on health behaviors between males and females, considering distinct health-related preferences and risks associated with gender.

By analyzing CSLC data within the framework of the DID model, this study seeks to provide insights into the causal relationships between health insurance copayment changes and health behaviours among older adults in Japan. This approach enables a rigorous assessment of how policy adjustments influence healthcare utilization patterns and health outcomes within the aging population.

4 . 研究成果

The findings of this research indicate the intricate relationship between health insurance copayment and health behaviours among older individuals in Japan. Specifically, the study reveals that an increase in copayment, signaling a decrease in health insurance coverage, is associated with a notable increase in positive health behaviours. This aligns with existing literature suggesting that reducing financial barriers to healthcare access may discourage individuals from engaging in healthcare services, thereby fostering healthier lifestyles among older adults.

However, the impact on risky health behaviours presents a complex scenario. While it is observed a decline in cigarette consumption in response to higher copayments, there was a contrasting increase in alcohol consumption, particularly among highly educated individuals and males. This phenomenon may be attributed to cultural beliefs in Japan that moderate alcohol consumption, especially in social contexts like communication or celebration, can confer health benefits. This cultural perspective may contribute to the observed increase in alcohol consumption.

Furthermore, the analysis reveals the heterogeneous nature of behavioural responses across different sociodemographic groups. Individuals with higher levels of education exhibited more pronounced changes in both positive and negative health behaviours in response to shifts in health insurance coverage. This emphasizes the significance of considering socioeconomic factors in tailoring interventions aimed at promoting healthy behaviours among older populations.

Gender differences also emerged prominently in the findings. While males showed a significant decrease in smoking rates, they concurrently demonstrated a notable increase in alcohol consumption following the copayment increase. This gender disparity highlights the necessity for gender-sensitive health interventions that address the differential impacts of health policy changes on health behaviours among older men and women.

Overall, this study contributes to the expanding body of research on the effects of health insurance on health behaviours among older adults. By examining the impacts of copayment increases on both positive and risky health behaviours, and by considering

variations across sociodemographic characteristics, The findings offer valuable evidence-based insights for policymakers aimed at promoting healthy aging and mitigating adverse health outcomes associated with changes in health policy, both in Japan and potentially in other similar contexts globally.

5. 主な発表論文等

〔雑誌論文〕 計1件（うち査読付論文 0件 / うち国際共著 0件 / うちオープンアクセス 1件）

1. 著者名 Chun Yee Wong; Shugo Shinohara	4. 巻 EMS-2024-03
2. 論文標題 Impacts of Copayment Change on Health Behaviours for Older People: Evidence from a Japanese Health Policy Reform	5. 発行年 2024年
3. 雑誌名 IUJ Research Institute Working Paper	6. 最初と最後の頁 1-23
掲載論文のDOI（デジタルオブジェクト識別子） なし	査読の有無 無
オープンアクセス オープンアクセスとしている（また、その予定である）	国際共著 -

〔学会発表〕 計1件（うち招待講演 1件 / うち国際学会 0件）

1. 発表者名 WONG CHUN YEE
2. 発表標題 The Impact of Health Insurance on Health Behaviours among Older People: Evidence from Japan
3. 学会等名 Pensions, Retirement and Ageing seminar（招待講演）
4. 発表年 2023年

〔図書〕 計0件

〔産業財産権〕

〔その他〕

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6. 研究組織

氏名 （ローマ字氏名） （研究者番号）	所属研究機関・部局・職 （機関番号）	備考
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7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8. 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関
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