

# Appendix for “How You Pay Drives What You Choose: Health Savings Accounts versus Cash in Health Insurance Plan Choice”\*

Jonathan Gruber      Mengyun Lin      Haoming Liu      Junjian Yi

April 2024

## Appendix A. Supplementary materials on the healthcare system in Singapore

Unless otherwise stated, all descriptions of the policy background in the main text pertain to the period from 2013 to 2015. In the appendix below, we provide a description of its evolution before and after the study period. For any discrepancies between descriptions in the paper and the current regulations, please refer to the latest Central Provident Fund Act via Singapore Statute Online.

### A1 The Central Provident Fund (CPF)

The Central Provident Fund (CPF) was established in 1955 to help workers save for retirement. After decades of evolution, it is now a mandatory comprehensive social security savings scheme that covers retirement, housing, healthcare, and dependent protection. All working Singaporean residents (citizens and permanent residents) and their employers make monthly contributions to the CPF. Contribution rates decrease with an employee’s age and income level (see Table A1). The maximum accumulated funds are subject to the CPF

---

\*Gruber: Massachusetts Institute of Technology and NBER; email: gruberj@mit.edu. Lin: Xiamen University; email: lin.mengyun@xmu.edu.cn. Liu: National University of Singapore; email: esliuhm@nus.edu.sg. Yi: Peking University; email: junjian.yi@gmail.com.

annual limit, which was SG\$30,600 during our sample period (2013-2015) and was raised to SG\$37,740 in 2016. As long as the total annual contribution doesn't exceed the limit, CPF members are encouraged to make cash top-ups to the CPF to build up savings for future consumption.<sup>1</sup> By the end of 2014, CPF members aged between 45 and 54 had accumulated SG\$212,000 on average in their CPF accounts.<sup>2</sup>

CPF contributions are distributed disproportionately to three accounts and restricted to use for the following purposes: (1) the Ordinary Account (OA) for first home purchase, CPF insurance, investment, and education; (2) the Special Account (SA) for approved investment products and retirement; and (3) the MediSave Account (MA) for approved medical expenses and health insurance. Given the high demand for home purchase at a young age, the CPF allocates over half to the OA for members below 50 and less than one-fourth for members above 60. As the need for medical services increases with age, the proportion of CPF allocated to the MA increases from around 20% below age 35 to around 65% above age 60 during our study period between 2013 and 2015. Details on CPF contribution rates and allocation rates as a percentage of monthly income are presented in Table A1.

Except for these approved uses, funds in the CPF are frozen until two essential changes occur at age 55. First, the Retirement Account (RA) is created by transfers from the OA and the SA. It is intended for a monthly income payment to support the basic standard of living for about 20 years from age 65.<sup>3</sup> Second, individuals are entitled to withdraw a proportion of the cash balances in their CPF accounts. Before 2013, the withdrawable amount was subject to the day when the individual turned 55. During our sample period from 2013 to 2015, the balances were only available for withdrawal after setting aside the CPF minimum sum and the MediSave minimum sum. Details on the withdrawal rules are provided in Appendix A2.

Funds in the CPF earn interest. The OA pays interest of 2.5% per annum, while the other three accounts pay 4% per annum. In addition, the first SG\$60,000 of the CPF balances earns an extra 1% of interest per annum, and as of January 2016, the first SG\$30,000 earns

---

1. The top-up follows the allocation rates for mandatory CPF contributions. Please refer to <https://www.cpf.gov.sg/member/faq/growing-your-savings/retirement-sum-topping-up-scheme/what-are-the-differences-between-topping-up-my-retirement-saving>.

2. Please refer to CPF Trends 2015: [https://www.cpf.gov.sg/Assets/members/Documents/CPFTrends\\_Net\\_Balances\\_2015.pdf](https://www.cpf.gov.sg/Assets/members/Documents/CPFTrends_Net_Balances_2015.pdf) (visited on April 1, 2019).

3. Monthly payouts commence after application at any time after the eligible age of 65.

an extra 1% of interest from age 55. These interest rates are attractive, since they are much higher than the interest rate for one-year bank fixed deposits, which is around 0.31% to 0.33% during our sample period (2013-2015).

## **A2 Withdrawals of CPF savings**

Individuals are entitled to withdraw a proportion of their CPF savings at age 55 and onward. The withdrawal percentage at age 55 depends on the member's 55<sup>th</sup> birthday (see Table A2), and decreases from 50% before 2009 to 10% in 2012. During our sample period from 2013 to 2015, members can withdraw up to SG\$5,000, or the balances aside from the CPF Minimum Sum (see Appendix A2.1) and the MediSave Minimum Sum (see Appendix A2.2), whichever is higher. The withdrawal is made on a yearly basis, except for during cases such as unemployment. Since January 2017, the MediSave funds can no longer be withdrawn.<sup>4</sup>

Withdrawals from the CPF can be initiated anytime after turning 55, through a straightforward and efficient process. Around two months before a member's 55th birthday, the CPF Board sends out an early withdrawal notice with comprehensive instructions so that individuals can prepare their requests ahead of time. To further assist those nearing 55, the CPF Board offers monthly informational sessions in multiple languages to explain the withdrawal procedure. Applicants can choose to apply online or submit a physical form to the CPF Board. The form is designed for ease of use, and states prominently that it takes only 10 minutes to complete. Once submitted, the processing time varies between 2 and 10 business days after the individual's 55th birthday, with funds quickly transferred to the member's chosen bank account.

There are other situations in which individuals are eligible to withdraw CPF savings before 55. For example, CPF savings can be fully withdrawn when a member leaves Singapore and West Malaysia; savings in the OA and the SA (not the MA) can be fully withdrawn if the member is diagnosed as terminally ill. Early withdrawal is also allowed for severe medical conditions, such as permanent incapacity to work or a severely reduced life expectancy. Upon the death of a CPF member, their CPF savings are distributed as their

---

4. See Amendment No.2 of 2016 (<https://sso.agc.gov.sg/Acts-Supp/26-2016/Published/20161107170000?DocDate=20161107170000>)

inheritance.

### **A2.1 The CPF Minimum Sum**

The CPF Minimum Sum scheme (CMS) was introduced in 1987 to guarantee sufficient income for CPF members after retirement. At age 55, the RA is created to set aside the CMS with transfers from the OA and the SA. The CMS shortfall is compensated for by future CPF inflows or pledged using the property bought using CPF savings. As shown in Table A3, the CMS is fixed within the same birth cohort but adjusted every year for each successive cohort to account for inflation, longer life expectancies, and post-retirement needs.

In 2017, the Retirement Sum scheme replaced the CPF Minimum Sum scheme. The new scheme offers three options for minimum sums. A member can set aside the Full Retirement Sum for a basic retirement income or the Enhanced Retirement Sum for a higher income. The Basic Retirement Sum is optional for individuals who own a property with a remaining lease that can last over 95 years.

### **A2.2 The MediSave Minimum Sum**

The MediSave Minimum Sum (MMS) is the minimum amount a member needs to maintain in their MA before making a CPF withdrawal after age 55. This is what a CPF member is expected to need to support their healthcare expenses in old age. The MMS is subject to an annual adjustment to account for medical cost inflation (see Table A4). Despite a progressive increase in the MMS, about six in ten active CPF members could meet the MMS when they turned 55 in 2013 and 2014.<sup>5</sup> In 2016, the MMS was scrapped.

## **A3 MediShield**

MediShield is a low-cost catastrophic medical insurance scheme introduced in 1990. Individuals up to age 92 are automatically insured unless they opt out. As of 2014, over 90% of Singaporean residents were covered by MediShield. In November 2015, MediShield

---

5. CPF Trends, 2014 and 2015: [https://www.cpf.gov.sg/Assets/members/Documents/CPFTrends\\_MedisaveMinimumSum2014.pdf](https://www.cpf.gov.sg/Assets/members/Documents/CPFTrends_MedisaveMinimumSum2014.pdf); [https://www.cpf.gov.sg/Assets/members/Documents/CPFTrends\\_Medisave\\_Scheme\\_2015.pdf](https://www.cpf.gov.sg/Assets/members/Documents/CPFTrends_Medisave_Scheme_2015.pdf) (visited on April 1, 2019).

was replaced by MediShield Life, which is compulsory for all Singapore residents.<sup>6</sup>

MediShield covers large hospital bills in subsidized wards (class B2/C) and costly outpatient treatments such as chemotherapy and dialysis.<sup>7</sup> Inpatient bills are subject to high deductibles of SG\$1,500-\$3,000 and a coinsurance rate of 20% to 10% as the bill increases.<sup>8</sup> Outpatient bills are subject to a co-insurance rate of 20%, without any deductibles. The maximum claim limit per policy year is SG\$70,000, with a lifetime cap of SG\$300,000. MediSave dollars can be used to pay the co-payment components and expenses beyond the limit.

MediShield premiums are risk-rated by age cohort. During our sample period, premiums increase with age, from SG\$50 for a 5-year-old and below to SG\$1,190 for an 85-year-old and above. The maximum coverage age was raised from 85 to 90 in March 2013, and further to 92 one year later. Individuals are entitled to pay MediShield premiums fully using MediSave.

#### **A4 Integrated Shield Plans**

Integrated Shield Plans (IPs) date back to 1994 when they were called the Private Medical Insurance Scheme (PMIS). In 2005, the PMIS was integrated with MediShield, restructured, and renamed the IPs. These consist of (1) a public insurance component provided by the Singapore government and (2) a private insurance component provided by the private insurance companies. From 1994 to 2002, there were only three approved PMIS insurers: NTUC Income, AIA, and Great Eastern. Subsequently, more insurers entered the market, including Aviva and Prudential in 2005, AXA in 2016, and Raffles in 2018. In addition to IPs, the insurers then also offer an IP rider to cover the whole co-payment portion (deductible

---

6. Unlike its predecessor, MediShield Life does not set lifetime claimable limits, restrictions on coverable age, or exclusion of pre-existing conditions. An enrollee with pre-existing conditions may need to pay 30% additional premiums for the first 10 years, after which they pay the same standard premium as everyone else in their age group. Additional premiums are also payable by MediSave.

7. Non-subsidized bills (class A/B1 and private hospitals) are pro-rated before MediShield claims are computed.

8. Deductibles vary by age and class of wards: SG\$ 1,500 for a class C ward, SG\$2,000 for a class B2 ward and day surgery for those 80 years and below, SG\$2,000 for a class C ward, and SG\$3,000 for a class B2 ward and day surgery for those above 80 years. Coinsurance rates for inpatient care are 20% for claimable amounts below SG\$3000, 15% for claimable amounts between SG\$3001 and SG\$5000, and 10% for claimable amounts above SG\$5001. The coinsurance rate for day surgery is 20%.

and coinsurance).<sup>9</sup>

As of 2016, all Singapore residents are covered by MediShield Life, and two out of three residents have IPs. The percentage of Singapore residents with both IPs and IP riders has increased significantly, from 19% in 2011 to 32% in 2015.

Insurers are granted latitude on other plan characteristics, such as premiums, deductibles, and limits on annual and lifetime reimbursements. Premiums by age and plan types are summarized in Table A5. Insurance covers medical spending only when  $\text{Total Cost} \times \text{Claimable Ratio} > \text{Deductible}$  holds. out-of-pocket medical expenses (OOP) for a medical bill under an IP are computed as follows:

$$MOOP = \text{Total cost} - (\text{Total cost} \times \text{Claimable Ratio} - \text{Deductible}) \times (1 - \text{Coinsurance Rate}).$$

Insurers set different deductibles for different plan types, based on the healthcare facility or ward the plan is meant to cover. The set of deductibles also varies across insurance companies. Deductibles of type A and type P plans for the five insurance companies during our sample period are summarized in Table A6.<sup>10</sup> The proration factors indicate the proportion of total spending that is claimable. They vary across room types and insurance companies. Claimable ratios during our sample period are summarized in Table A7.

IPs are operationally integrated with MediShield in terms of both premium collection and claims settlement. IP enrollees first pay their premiums to private insurers. These insurers divide the premiums into two components: one for MediShield coverage provided by the CPF Board and the other for additional private insurance coverage provided by IP insurers. They then give the first component to the CPF Board. Private insurers first settle the claims submitted by hospitals. Reimbursements are divided into two components: one payable from MediShield coverage provided by the CPF Board and the other payable from additional private insurance coverage provided by IP insurers. The CPF Board then pays

---

9. Riders sold from March 8, 2018 are subject to a minimum 5% co-payment as required by the Ministry of Health. Most insurers have also extended the minimum 5% co-payment feature to existing plans sold before March 8, 2018. Premiums for IP riders are not payable by MediSave.

10. Among IPs provided by the same insurance company, type P and type A plans have the same set of deductibles with respect to ward classes; Type B and type C plans have the same deductibles for class B1 wards and below, but may have lower deductibles for class A wards and private hospitals.

the first component to the insurers.

### **A5 Changes in CPF contribution rates and allocation rates at age 50**

Take the year 2014 as an example. At age 50, there are three changes in CPF contribution rates and allocation rates of CPF to the MediSave Account: (1) the contribution from the employer decreases from 16% to 14% of monthly income, which reduces the annual CPF savings; (2) the contribution from the employee decreases from 20% to 18.5% of monthly income, which increases the disposable income; and (3) the allocation from CPF to MediSave increases from 9% to 9.5% of monthly income, which increases the savings that can be used in healthcare.<sup>11</sup> However, these changes do not confound our RD analysis on insurance choices at age 50.

At age 50, premiums for an average type P plan increase by SG\$343, of which SG\$228 is payable by MediSave and SG\$115 must be paid in cash. This is actually affordable given the increase in disposable income due to change (2), together with the increase in medical savings due to change (3).<sup>12</sup> Therefore, individuals should have more disposable funds after the age of 50 to pay for IP premiums, and thus exhibit a higher demand for insurance.

However, in the RD design, we observe a decrease in demand for type P plans at age 50. This may be because individuals are very sensitive to the fact that they need to pay cash for the premiums, or because they have not noticed the changes. If the latter is true, there is a good chance that individuals may also not notice the decrease in annual CPF savings due to the decrease in employers' contribution to the CPF (change (1)), either.

---

11. In addition, there's a decline from 19% to 13.5% in income allocation to the Ordinary Account, which supports home purchases, CPF insurance, investments, and education. This might have minimal effects on members' demand for IPs unless CPF members divert funds from supplemental health insurance to these other purposes. However, compared with the three changes described earlier, this impact is likely to be of secondary significance.

12. We use the median income level in Singapore in 2015, SG\$30,000, for illustration. Disposable income increases by SG\$450 due to change (2) and medical savings increase by SG\$150 due to change (3).

**Table A1** CPF contribution and allocation rates

Employee's Age	Contribution rate			Allocation rate		
	By employer	By employee	Total	OA	SA	MA
<i>Panel A. From Sep 2012 to Dec 2014</i>						
≤ 35	16	20	36	23	6	7
36-45	16	20	36	21	7	8
46-50	16	20	36	19	8	9
51-55	14	18.5	32.5	13.5	9.5	9.5
56-60	10.5	13	23.5	12	2	9.5
61-65	7	7.5	14.5	3.5	1.5	9.5
> 65	6.5	5	11.5	1	1	9.5
<i>Panel B. From Jan 2015 to Dec 2015</i>						
≤ 35	17	20	37	23	6	8
36-45	17	20	37	21	7	9
46-50	17	20	37	19	8	10
51-55	16	19	35	14	10.5	10.5
56-60	12	13	25	12	2.5	10.5
61-65	8.5	7.5	16	3.5	2	10.5
> 65	7.5	5	12.5	1	1	10.5

*Notes:* The table shows CPF contribution and allocation rates as the percentage of the monthly income that apply to private-sector employees and public-sector non-pensionable employees who earn monthly wages of over SG\$1,500. Employers and employees do not need to contribute to the CPF on income beyond the Ordinary Wage Ceiling. During our sample period, the ceiling is SG\$5,000. Contribution and allocation rates for other periods and for other employment types and income levels can be found at

<https://www.cpf.gov.sg/employer/employer-obligations/how-much-cpf-contributions-to-pay/past-cpf-contribution-and-allocation-rates> (visited on October 11, 2022).

**Table A2** CPF withdrawal rule at age 55

Date of 55th birthday	Applicable withdrawal rule
On or before Dec 31, 2008	50%
Jan 1, 2009 to Dec 31, 2009	40%
Jan 1, 2010 to Dec 31, 2010	30%
Jan 1, 2011 to Dec 31, 2011	20%
Jan 1, 2012 to Dec 31, 2012	10%
Jan 1, 2013 to Dec 31, 2015	The higher of SG\$5,000 or the cash balances after setting aside both the CPF Minimum Sum and the MediSave minimum sum

*Notes:* This table shows the rule for withdrawals from the CPF at age 55. Before 2013, the applicable withdrawal rule shows the percentage of available CPF cash balances. Withdrawal rules have changed significantly since 2016. For example, cash withdrawals from MediSave at age 55 are not allowed after January 1, 2017. For more policy details and evolution, please refer to the Central Provident Fund Act at Singapore Statute Online (<https://sso.agc.gov.sg/Act/CPFA1953?ValidDate=20220801>.)

**Table A3** The CPF Minimum Sum

55th birthday on or after	CPF Minimum Sum		
July 1, 2003			80,000
July 1, 2004			84,500
July 1, 2005			90,000
July 1, 2006			94,600
July 1, 2007			99,600
July 1, 2008			10,600
July 1, 2009			117,000
July 1, 2010			123,000
July 1, 2011			131,000
July 1, 2012			139,000
July 1, 2013			148,000
July 1, 2014			155,000
July 1, 2015			161,000
July 1, 2016			161,000
	Basic Retirement Sum	Full Retirement Sum	Enhanced Retirement Sum
Jan 1, 2017	83,000	166,000	249,000
Jan 1, 2018	85,500	171,000	256,500
Jan 1, 2019	88,000	176,000	264,000
Jan 1, 2020	90,500	181,000	271,500

*Notes:* This table shows the CPF Minimum Sum and its successors by different age cohorts. The monetary value is in current Singapore dollars.

**Table A4** The MediSave Minimum Sum and Contribution Ceiling/Basic Healthcare Sum

	Minimum sum	Contribution Ceiling
2009	32,000	37,000
2010	34,500	39,500
2011	36,000	41,000
2012	38,500	43,500
2013	40,500	45,500
2014	43,500	48,500
2015	43,500	48,500
		Basic Healthcare Sum
2016	-	49,800
2017	-	52,000
2018	-	54,500
2019	-	57,200
2020	-	60,000

*Notes:* This table shows the MediSave Minimum Sum and Contribution Ceiling up to 2015, and Basic Healthcare Sum since 2016. In 2016, the MediSave Minimum Sum was scrapped and the MediSave

Contribution Ceiling was renamed the Basic Healthcare Sum. The monetary value is in current Singapore dollars.

**Table A5** Premiums for IPs

Age	Type P plans	Type A plans	Type B plans	Type C plans
≤19	212	127	105	85
20-29	235	141	118	85
30-39	349	225	179	139
40-44	624	438	327	270
45-49	685	454	341	278
50-54	1,028	680	508	421
55-59	1,183	719	541	428
60-64	1,628	1,036	781	597
65-69	2,230	1,501	1,055	749
70-72	2,932	1,989	1,385	870
73-74	3,366	2,317	1,625	1,022
75-77	4,343	3,008	2,061	1,233
78-79	4,687	3,196	2,102	1,438
80-82	5,495	3,589	2,502	1,719
83-84	6,000	3,930	2,674	1,869

*Notes:* This table summarizes the age profile of average IP premiums by plan type. In particular, the premiums include those for the MediShield component and those for the private insurance component. Premiums for enrollees above age 85 are omitted from the table. The sample period is from March 2013 to October 2015. The monetary value is in current Singapore dollars.

**Table A6** Deductibles for IPs

Ward class	Insurer A	Insurer B	Insurer C	Insurer D	Insurer E
Class C	1,500	2,250	2,250	2,250	1,500
Class B2	2,250	3,000	3,000	3,000	2,000
Class B1	3,000	3,750	3,750	3,750	2,500
Class A	4,500	5,250	5,250	5,250	3,500
Private hospital	4,500	5,250	5,250	5,250	3,500

*Notes:* This table summarizes the deductibles associated with different hospital room types in IPs of type A and type P, as issued by the five insurance companies. The sample period is from March 2013 to October 2015. The monetary value is in current Singapore dollars.

**Table A7** Proration factors for IPs

Plan type	Private hospitals	Class A	Class B1	Class B2 and below
Type P plans	100%	100%	100%	100%
Type A plans	50-70%	100%	100%	100%
Type B plans	30-50%	70-85%	100%	100%
Type C plans	8-10%	10-20%	20-40%	100%

*Notes:* This table summarizes the proration factors for different hospital rooms by IP type. Proration factors determine the proportion of total spending that is claimable. The sample period is from March 2013 to October 2015.

## Appendix B. Supplementary empirical results

### B1 Falsification tests

We conduct two falsification tests to disentangle the effect of cash outlays and that of the increased premiums. First, we perform tests around the ages when premiums increase but the payment method remains the same. Second, we examine the plan choices of type B enrollees, whose premiums increase but are fully payable by MediSave.

RD estimates in Table B5 generally support the assumption that our prior findings are due to cash outlays rather than to the increased premiums around age 50. However, there are some exceptions. For example, enrollment in type B plans also slightly increases at age 50, as those who switch down from type P plans may choose to enroll in type B plans. We also find significant jumps at age 60, when cash outlays for type P plans increase by over SG\$400. However, the magnitude is much smaller than at age 50, when cash outlays for type P plans increase by SG\$235. This implies that the amount of cash outlays affects insurance choices (the intensive margin), but not as significantly as the fact that one needs to pay cash (the extensive margin). Finally, we see a decrease in switching down from type P plans at age 55. This may be because two out of the six type A plans start to require cash outlays for premiums at 55 (Table 1(b)).

However, the tests have two weaknesses. First, the increase in premiums at other ages (except for age 60) is generally smaller than at age 50. Second, switching down from type B plans is subject to fewer lower-coverage alternatives, and therefore is not perfectly comparable to switching down from type P plans; switching up from type B plans may also be complicated by fewer type B enrollees switching up to type P plans due to the change in payment method for type P plans. This motivates the second empirical strategy: a difference-in-differences design that uses a legislated change in MediSave withdrawal limits only, keeping total premiums constant.

## B2 Estimating the price elasticities of demand for type P plans

This section explains how we isolate the effect of premiums on insurance demand at age 50. The basic idea is to calculate the proportion of change in demand for type P plans at age 50 that can be attributed to changes in premiums. This is done using the price elasticities of demand (PED) for type P plans at ages other than 50.

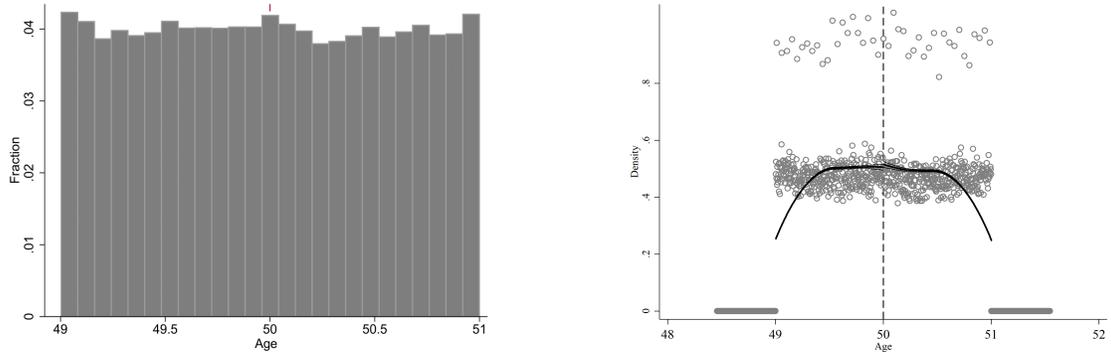
In particular, we first calculate the PED for type P plans by analyzing the relationship between premium changes and the corresponding fluctuations in raw type P enrollment at various age thresholds—30, 40, 55, 60, 65, and 70—using the following equation:

$$PED = \frac{\Delta Enrollment\ in\ P}{\Delta Mean\ premiums\ of\ P\ plans} \times \frac{Mean\ premiums\ of\ P\ plans}{Mean\ enrollment\ in\ P},$$

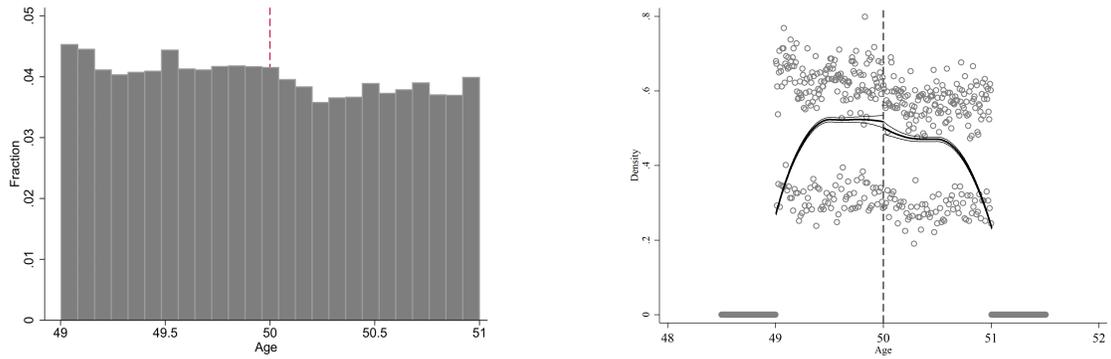
whose data and results are shown in Table B4.

Then we use the PED estimated at these ages to impute the enrollment change at age 50, assuming that the PED at age 50 is the same as it is at these ages. We divide the implied enrollment change by the observed enrollment change at age 50 ( $= -0.088$ ), and obtain the share of demand change at age 50 that can be explained by the increase in premiums. Results are shown in Table B5.

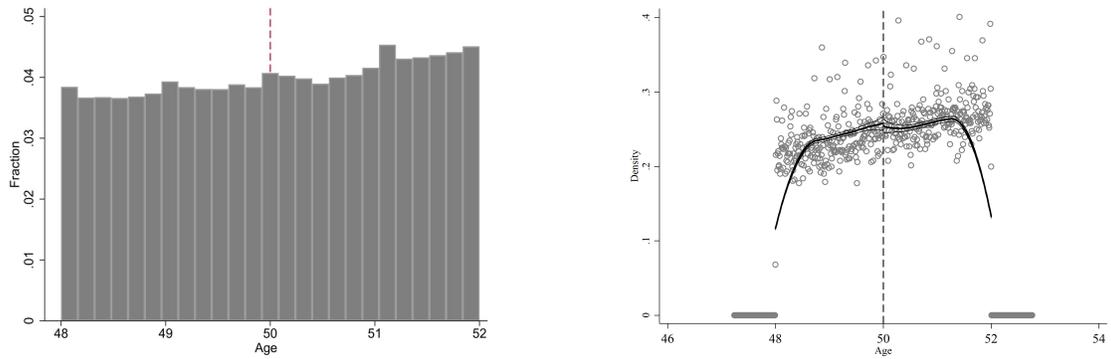
Take age 60 for an example. We find that the PED is  $-0.207$  at age 60 (Column (5) in Table B4); assuming that the PED does not change from age 50 to age 60, the implied change in type P enrollment is  $-0.036$  (Column (2) in Table B5), and 41% of the observed change in type P enrollment at age 50 can be explained by the implied price change (Column (3) in Table B5).



(a) All enrollees



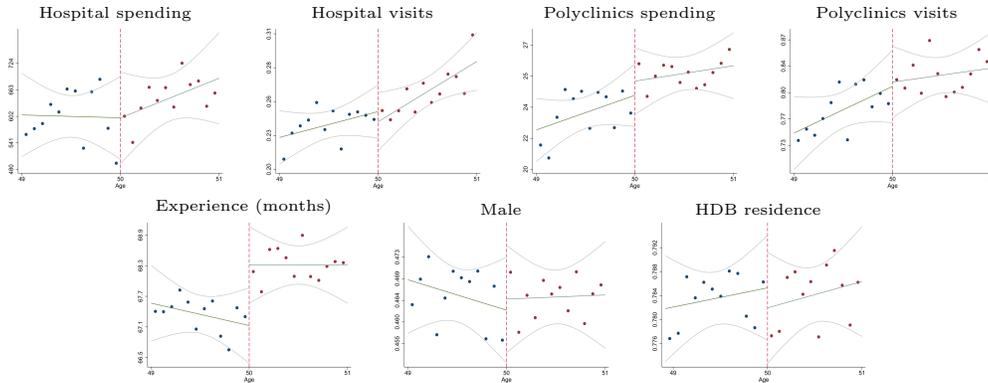
(b) Enrollees in type P plans



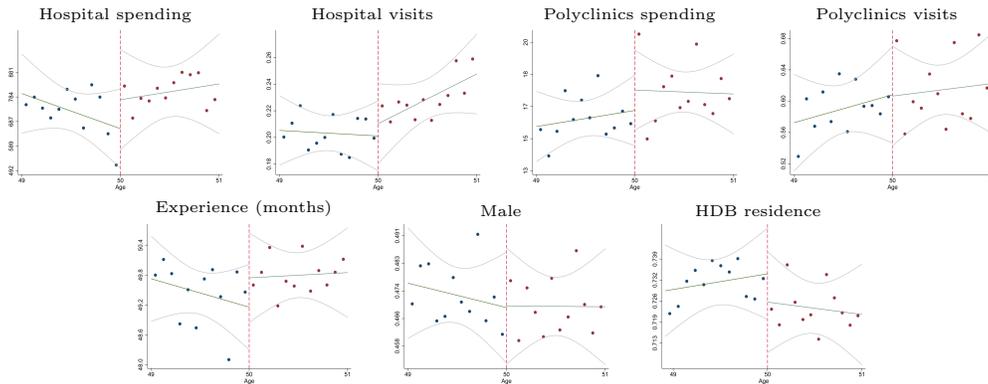
(c) Enrollees in type A plans

**Figure B1** Age distribution of the RD sample

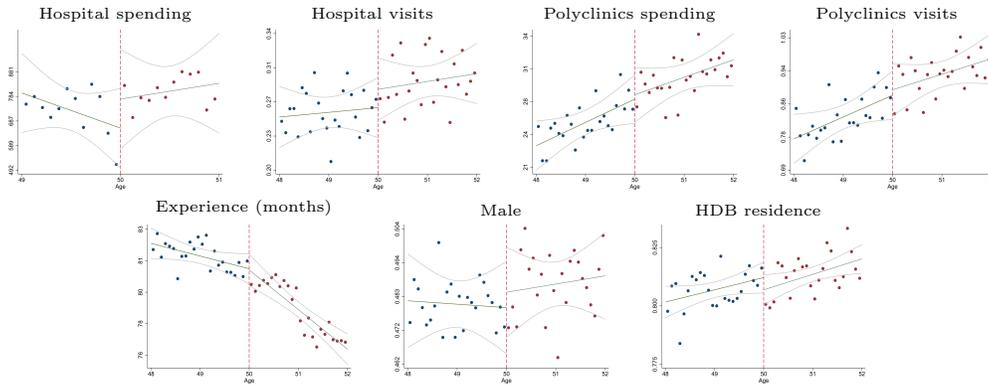
*Notes:* This figure shows the age distribution of all IP enrollees in (a), type P enrollees in (b), and type A enrollees in (c). The left column shows the histograms of enrollees' age at the time of enrollment. The right column plots a nonparametric regression of each half of the distribution following McCrary (2008), testing for a discontinuity at the age threshold of 50. The point estimate for the discontinuity is 0.020 (s.e.=0.013) in (a); -0.012 (s.e. = 0.011) in (b); and 0.008 (s.e.=0.012) in (c). The sample period is from March 2013 to October 2015.



(a) All enrollees



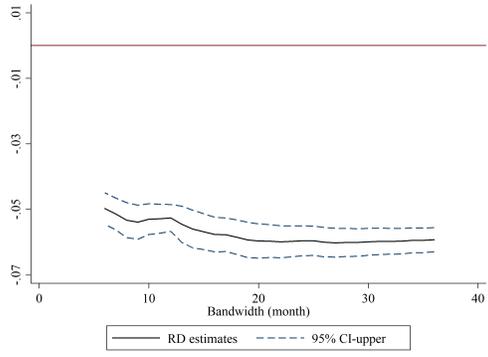
(b) Enrollees in type P plans



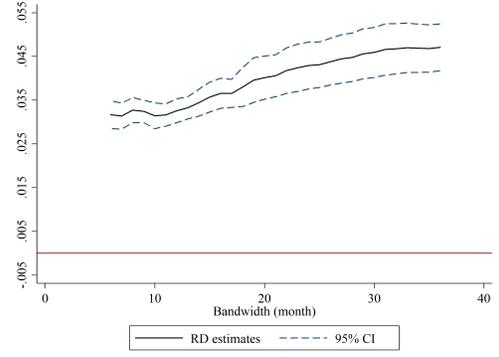
(c) Enrollees in type A plans

**Figure B2** Balance of baseline individual covariates

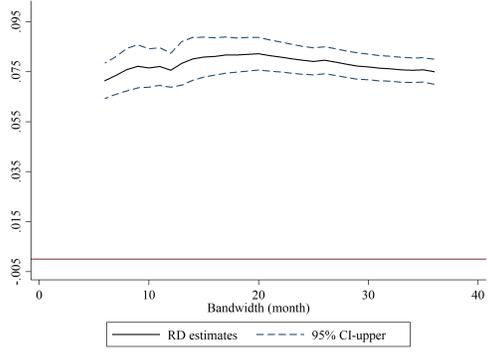
*Notes:* The figure plots the baseline individual covariates against the age at the the time of enrollment for all IP enrollees in (a) and type P enrollees in (b), with a bandwidth of 12 months; and type A enrollees in (c), with a bandwidth of 24 months. A linear fit is generated separately on each side of age 50, with 95% confidence intervals. The number of visits and amount of spending in hospital/visits are from the year before enrollment. Experience is measured by the cumulative number of months the enrollees have been enrolled in the type of current plan up to the time of enrollment. The sample period is from March 2013 to October 2015.



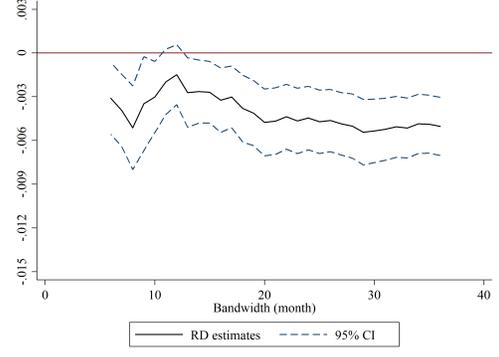
(a) Enrolling in type P plans



(b) Switching down from type P plans



(c) Opting out of IPs from type P plans



(d) Switching up from type A plans

**Figure B3** RD estimates as a function of bandwidth

*Notes:* The figure shows RD estimates based on the specification in Equation (1) as a function of bandwidth from 6 to 36 months. Dashed lines represent the 95% confidence intervals. Dependent variables are indicators of enrolling in type P plans in (a), switching down in (b), opting out in (c), and switching up in (d); samples are all enrollees in (a), type P enrollees in (b) and (c), and type A enrollees in (d). The sample period is from March 2013 to October 2015.

**Table B1** Summary statistics of RD sample

Variables	All enrollees		Type P enrollees		Type A enrollees	
	Mean	S.D	Mean	S.D	Mean	S.D
Enrolling in type P plans	0.417	0.493	-	-	-	-
Switching down	-	-	0.028	0.165	-	-
Opting out	-	-	0.036	0.187	-	-
Switching up	-	-	-	-	0.013	0.112
Above age 50	0.498	0.5	0.478	0.5	0.527	0.499
Male	0.465	0.499	0.472	0.499	0.484	0.5
HDB	0.781	0.413	0.728	0.445	0.806	0.396
Experience (consecutive # months)						
with the IP category	67.824	33.45	49.608	25.811	79.911	30.103
Healthcare utilization (- 1yr)						
Medical spending in hospitals	622.945	4516.16	764.448	5190.908	539.801	3875.777
# visits to hospitals	0.25	1.012	0.216	0.824	0.276	1.113
Medical spending in polyclinics	24.294	81.598	16.536	60.148	27.83	90.967
# visits to polyclinics	0.8	2.146	0.602	1.844	0.885	2.295
Observations	172,922		74,364		108,881	

*Notes:* This table summarizes the variables used in the regression discontinuity design. The sample period is between March 2013 and October 2015.

**Table B2** RD estimates: Baseline covariates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Hospital spending	# Hospital visits	Polyclinic spending	# polyclinics visits	Experience	Male	Public housing
<i>Panel A: all enrollees</i>							
Above 50	-1.792 (46.514)	-0.012 (0.008)	1.028 (0.848)	0.013 (0.017)	0.439 (0.293)	0.003 (0.004)	0.013 (0.014)
Obs	172,922	172,922	172,922	172,922	172,922	172,922	172,922
Adjusted R <sup>2</sup>	0.001	0.003	0.026	0.034	0.520	0.006	0.028
Mean	622.945	0.250	24.294	0.800	67.824	0.465	0.781
<i>Panel B: enrollees in type P plans</i>							
Above 50	104.697 (67.376)	0.005 (0.008)	1.381 (1.537)	0.013 (0.034)	0.516 (0.354)	0.005 (0.007)	-0.004 (0.005)
Obs	74,364	74,364	74,364	74,364	74,364	74,364	74,364
Adjusted R <sup>2</sup>	0.001	0.001	0.016	0.023	0.192	0.006	0.018
Mean	764.448	0.216	16.536	0.602	49.608	0.472	0.728
<i>Panel C: enrollees in type A plans</i>							
Above 50	31.536 (46.187)	0.019 (0.013)	0.545 (0.875)	0.016 (0.025)	0.137 (0.274)	0.004 (0.005)	0.029 (0.030)
Obs	108,881	108,881	108,881	108,881	108,881	108,881	108,881
Adjusted R <sup>2</sup>	0.001	0.003	0.022	0.029	0.334	0.004	0.018
Mean	539.801	0.276	27.830	0.885	79.911	0.484	0.806
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Plan FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and month FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*Notes:* The table shows RD estimates based on specifications in Equation (1), and dependent variables are shown in the first row. The number of visits and amount of spending in hospitals/polyclinics are from the previous period. Experience refers to the cumulative number of months enrollees have been enrolled in the type of current plan up to the time of enrollment. The bandwidth is 12 months in the sample of all IP enrollees and type P enrollees (Panels A and B), and 24 months in the sample of type A enrollees (Panel C). The specification includes a linear polynomial, individual controls, plan fixed effects, enrollment year fixed effects, and enrollment month fixed effects. Individual controls include demographics, measures for health status, and enrollment experience. Standard errors clustered at age level are in parentheses, \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

**Table B3** RD estimates: Alternative choices of polynomial orders and kernels

	None		Linear		Quadratic		Cubic		Fourth-order	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Uniform	Triangular								
<i>Panel A. Enrolling in type P plans</i>										
Above 50	-0.060*** (0.002)	-0.057*** (0.002)	-0.053*** (0.002)	-0.052*** (0.002)	-0.051*** (0.002)	-0.048*** (0.002)	-0.044*** (0.003)	-0.042*** (0.003)	-0.039*** (0.005)	-0.046*** (0.005)
Obs	172,922	172,922	172,922	172,922	172,922	172,922	172,922	172,922	172,922	172,922
Adjusted R <sup>2</sup>	0.858	0.866	0.855	0.866	0.858	0.866	0.858	0.866	0.858	0.866
Mean	0.417	0.417	0.417	0.417	0.417	0.417	0.417	0.417	0.417	0.417
<i>Panel B. Switching down from type P plans</i>										
Above 50	0.047*** (0.003)	0.042*** (0.002)	0.033*** (0.001)	0.032*** (0.001)	0.031*** (0.002)	0.033*** (0.002)	0.037*** (0.002)	0.035*** (0.002)	0.032*** (0.003)	0.038*** (0.002)
Obs	74,364	74,364	74,364	74,364	74,364	74,364	74,364	74,364	74,364	74,364
Adjusted R <sup>2</sup>	0.040	0.037	0.035	0.037	0.041	0.037	0.041	0.037	0.041	0.037
Mean	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028
<i>Panel C. Opting out of IPs from type P plans</i>										
Above 50	0.075*** (0.002)	0.075*** (0.002)	0.075*** (0.004)	0.075*** (0.004)	0.074*** (0.005)	0.067*** (0.003)	0.058*** (0.005)	0.058*** (0.005)	0.059*** (0.007)	0.064*** (0.008)
Obs	74,364	74,364	74,364	74,364	74,364	74,364	74,364	74,364	74,364	74,364
Adjusted R <sup>2</sup>	0.106	0.103	0.062	0.103	0.106	0.103	0.106	0.103	0.106	0.103
Mean	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036
<i>Panel D. Switching up from type A plans</i>										
Above 50	-0.006*** (0.001)	-0.006*** (0.001)	-0.005*** (0.001)	-0.003*** (0.001)	-0.002* (0.001)	-0.002 (0.001)	-0.001 (0.002)	-0.002 (0.001)	-0.004* (0.002)	-0.003** (0.001)
Obs	108,881	108,881	108,881	108,881	108,881	108,881	108,881	108,881	108,881	108,881
Adjusted R <sup>2</sup>	0.021	0.021	0.017	0.021	0.021	0.021	0.021	0.021	0.021	0.021
Mean	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
Individual controls	Yes									
Plan FEs	Yes									
Year and Month Fes	Yes									

*Notes:* The table shows RD estimates with alternative choices of polynomial orders and kernels as specified in the first few columns. Dependent variables are indicators of enrolling in type P plans in Panel A, switching down in Panel B, opting out in Panel C, and switching up in Panel D; the samples are all IP enrollees in Panel A, type P enrollees in Panels B and C, and type A enrollees in Panel D. All specifications include individual controls, plan fixed effects, enrollment year fixed effects, and month fixed effects. Individual controls include demographics, measures for health status, and enrollment experience. Standard errors clustered at age level are in parentheses, \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

**Table B4** Price elasticities of demand (PED) for type P plans at various ages

Age	(1) Δ Enrollment in P	(2) Mean Enrollment in P	(3) Δ Mean Premiums of P plans	(4) Mean Premiums of P plans	(5) PED
30	0.001	0.794	106.7	288.8	0.003
40	-0.020	0.675	275.2	486.8	-0.052
50	-0.088	0.406	343.4	856.2	-0.539
55	-0.007	0.278	154.7	1105.3	-0.188
60	-0.015	0.221	445.3	1405.2	-0.207
65	-0.013	0.156	601.6	1928.7	-0.257
70	-0.005	0.098	702.6	2580.8	-0.192

*Notes:* This table summarizes the variables and data used to estimate the price elasticities of demand (PED) for type P plans around alternative age thresholds following the equation  $PED = \frac{\Delta Enrollment\ in\ P}{\Delta Mean\ premiums\ of\ P\ plans} \times \frac{Mean\ premiums\ of\ P\ plans}{Mean\ enrollment\ in\ P}$ . The estimated PED is in Column (5).

**Table B5** Implied enrollment changes using estimated PED

Age	(1) PED	(2) Imputed Δ Enrollment in P plan	(3) % of demand change at age 50 explained by increase in premiums
30	0.003	0.000	0.00%
40	-0.052	-0.009	10.26%
30 and 40	-0.107	-0.019	21.65%
55	-0.188	-0.033	37.60%
60	-0.207	-0.036	41.02%
65	-0.257	-0.044	50.14%
70	-0.192	-0.033	37.60%
55-70	-0.195	-0.032	36.47%

*Notes:* This table shows the share of enrollment changes in type P plans at age 50 that can be explained by premiums changes using PED estimated at various ages shown in the first column.

**Table B6** RD estimates: Alternative measures and samples

	(1)	(2)	(3)	(4)
	Age in quarters	Including early termination	Never used others' MA in the past 3 yrs	No inpatient stays in the past 3 yrs
<i>Panel A: enrolling in type P plans</i>				
Above 50	-0.052*** (0.002)	-0.055*** (0.002)	-0.056*** (0.002)	-0.054*** (0.002)
Obs	172,922	192,302	125,172	148,190
Adjusted R <sup>2</sup>	0.860	0.802	0.857	0.859
Mean	0.419	0.408	0.428	0.419
<i>Panel B: switching down from type P plans</i>				
Above 50	0.029*** (0.001)	0.035*** (0.002)	0.034*** (0.002)	0.035*** (0.002)
Obs	74,364	80,360	57,603	66,636
Adjusted R <sup>2</sup>	0.041	0.041	0.042	0.043
Mean	0.027	0.043	0.028	0.028
<i>Panel C: opting out of IPs from type P plans</i>				
Above 50	0.075*** (0.004)	0.073*** (0.003)	0.076*** (0.004)	0.075*** (0.004)
Obs	74,364	80,360	57,603	66,636
Adjusted R <sup>2</sup>	0.104	0.099	0.104	0.102
Mean	0.035	0.036	0.035	0.034
<i>Panel D: switching up from type A plans</i>				
Above 50	-0.005*** (0.001)	-0.013*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)
Obs	108,881	120,260	78,029	94,723
Adjusted R <sup>2</sup>	0.023	0.015	0.021	0.022
Mean	0.013	0.029	0.012	0.012
Individual controls	Yes	Yes	Yes	Yes
Plan FEs	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes

*Notes:* This table shows the results of robustness tests of the RD design from Equation (1). The dependent variables are indicators of enrolling in type P plans in Panel A, switching down in Panel B, opting out in panel C, and switching up in Panel D; the samples are all IP enrollees in Panel A, type P enrollees in Panels B and C, and type A enrollees in Panel D. Column (1) uses age measured in quarters instead of months. Column (2) shows results obtained from the sample that incorporates individuals who re-enroll in a plan before its termination. Columns (3) and (4) restrict the sample to those who never used other family members' MediSave and those who have had no inpatient stays in the past three years, respectively. All specifications assume a linear polynomial function and include individual controls, plan fixed effects, enrollment year fixed effects, and enrollment month fixed effects. Individual controls include demographics, measures for health status, and enrollment experience. Standard errors clustered at age level are in parentheses, \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

**Table B7** RD estimates: Falsification tests

	(1)	(2)	(3)	(4)	(5)
	Age 40	Age 45	Age 55	Age 60	Age 50, type B enrollees
<i>Panel A: enrolling in type P (B) plans</i>					
Above 50	-0.001 (0.001)	0.000 (0.001)	0.000 (0.002)	-0.011*** (0.001)	0.001* (0.001)
Obs	164,279	157,785	157,100	125,261	172,922
Adjusted R <sup>2</sup>	0.927	0.935	0.841	0.856	0.948
Mean	0.646	0.553	0.265	0.214	0.232
<i>Panel B: switching down</i>					
Above	0.000 (0.001)	0.000 (0.001)	-0.008** (0.003)	0.021*** (0.004)	0.000 (0.000)
Obs	102,378	84,143	43,955	28,178	39,861
Adjusted R <sup>2</sup>	0.001	0.002	0.055	0.033	0.000
Mean	0.002	0.003	0.046	0.038	0.000
<i>Panel C: opting out of IPs</i>					
Above	-0.000 (0.000)	0.000 (0.000)	-0.001 (0.008)	0.021*** (0.005)	-0.000 (0.001)
Obs	102,378	84,143	43,955	28,178	39,861
Adjusted R <sup>2</sup>	0.004	0.004	0.132	0.155	0.003
Mean	0.002	0.002	0.047	0.051	0.002
<i>Panel D: switching up</i>					
Above	0.001 (0.006)	-0.000 (0.002)	0.001 (0.001)	-0.002** (0.001)	-0.002 (0.002)
Obs	80,310	88,203	117,081	87,495	96,541
Adjusted R <sup>2</sup>	0.028	0.029	0.017	0.014	0.010
Mean	0.033	0.024	0.009	0.007	0.005
Individual controls	Yes	Yes	Yes	Yes	Yes
Plan FEs	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes

*Notes:* The table reports RD estimates based on Equation (1) around alternative ages and alternative samples as specified in the first row. The first four columns show RD estimates around age 40, age 45, age 55, and age 60 for enrolling in type P plans among all enrollees (Panel A), switching down/opting out among enrollees in type P plans within a 12-month bandwidth (Panels B and C), and switching up among enrollees in type A plans within a 24-month bandwidth (Panel D). Column (5) shows RD estimates around age 50 of enrolling in type B plans among all enrollees (Panel A), switching down/opting out among enrollees in type B plans within a 12-month bandwidth (Panels B and C), and switching up among enrollees in type B plans within a 24-month bandwidth (Panel D). The specification includes a linear polynomial, individual controls, plan fixed effects, enrollment year fixed effects, and enrollment month fixed effects. Individual controls include demographics, measures for health status, and enrollment experience. Standard errors clustered at age level are in parentheses, \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

**Table B8** Summary statistics of DID sample

Variables	All IP enrollees		Type P/A/B enrollees		Type A/B enrollees	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Enrolling in type P plans	0.178	0.382				
Switching down	-	-	0.013	0.111	-	-
Opting out	-	-	0.039	0.193	-	-
Switching up	-	-	-	-	0.005	0.071
Male	0.465	0.499	0.465	0.499	0.466	0.499
Age	63.538	2.692	63.55	2.693	63.7	2.701
HDB	0.797	0.403	0.796	0.403	0.831	0.375
Experience (consecutive # months) with the IP category	70.125	28.997	72.004	26.984	77.751	24.151
Healthcare utilization (- 1yr)						
Medical spending in hospitals	929.555	5,599.318	938.876	5,648.797	806.525	4,084.721
# visits to hospitals	0.425	1.39	0.43	1.403	0.444	1.457
Medical spending in polyclinics	88.361	176.414	89	177.54	97.604	186.799
# visits to polyclinics	2.351	3.804	2.361	3.82	2.548	3.959
Observations	135,595		132,058		106,771	

*Notes:* This table summarizes the variables used in the difference-in-differences samples. The sample period is between May 2013 and April 2014.

**Table B9** DID estimates: Placebo tests

	(1)	(2)	(3)	(4)
	Type P	Down	Out	Up
<i>Panel A: treated at 55</i>				
Above55 x Post	0.001 (0.001)	-0.001 (0.001)	0.000 (0.001)	0.001 (0.001)
Above55	0.016*** (0.004)	-0.010*** (0.003)	-0.013*** (0.004)	0.001 (0.001)
Obs	265,984	275,235	275,235	170,227
Adjusted R <sup>2</sup>	0.864	0.067	0.123	0.014
Mean	0.310	0.021	0.034	0.009
<i>Panel B: treated at 75</i>				
Above75 x Post	0.000 (0.002)	0.001 (0.002)	0.003 (0.003)	0.001 (0.001)
Above75	0.001 (0.001)	-0.001 (0.002)	-0.003 (0.003)	0.001 (0.001)
Obs	34,218	35,188	35,188	31,850
Adjusted R <sup>2</sup>	0.939	0.015	0.062	0.005
Mean	0.084	0.008	0.028	0.002
<i>Panel C: treated after Nov 2014</i>				
Above65 x Post 2014 Nov	-0.002 (0.001)	0.001 (0.001)	0.003 (0.002)	0.000 (0.001)
Above65	0.002 (0.002)	-0.001 (0.001)	-0.001 (0.002)	-0.001 (0.001)
Obs	127,818	129,194	129,194	94,716
Adjusted R <sup>2</sup>	0.923	0.020	0.027	0.023
Mean	0.253	0.009	0.011	0.007
Individual controls	Yes	Yes	Yes	Yes
Plan FEs	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes

*Notes:* The table shows placebo tests of DID estimates. The dependent variables are specified in the first rows. *TypeP* refers to the indicator of enrolling in type P plans, *Down* to the indicator of switching down, *Out* to the indicator of opting out, and *Up* to the indicator of switching up. Type C enrollees are excluded from all samples. In addition, first-time enrollees are excluded from the samples in columns (2) and (3), and enrollees in type P plans are further excluded from the sample in column (4). We first assume the policy targets those above 55 (Panel A) or 75 (Panel B) instead of 65. Above55/Above75 indicates that the individual is age 55/75 or above at the time of enrollment. Post indicates that the enrollment occurs after November 2013. We then assume the policy takes effect from Nov 2014 and estimate the model using a sample from May 2014 to Apr 2015 (Panel C). Above65 indicates that the individual is age 65 or above at the time of enrollment. Post 2014 Nov indicates that the enrollment occurs after Nov 2014. All specifications also include individual controls, plan fixed effects, and enrollment month fixed effects. Individual controls refer to individual demographics, measures for health status, and enrollment experience. Standard errors clustered at age level are in parentheses, \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

**Table B10** DID estimates: Robustness tests

	(1)	(2)	(3)	(4)
	PSM sample	Including early termination	Never used others' MA in the past 3 yrs	No inpatient stays in the past 3 yrs
<i>Panel A: enrollment in type P plans</i>				
Above65 x Post	0.009*** (0.002)	0.006*** (0.002)	0.008*** (0.002)	0.006*** (0.002)
Above65	-0.007*** (0.003)	-0.005*** (0.002)	-0.015*** (0.003)	-0.014*** (0.003)
Obs	94,374	153,161	79,118	104,274
Adjusted R <sup>2</sup>	0.857	0.865	0.841	0.843
Mean	0.158	0.163	0.192	0.176
<i>Panel B: switching down</i>				
Above65 x Post	-0.007*** (0.002)	-0.006*** (0.001)	-0.006*** (0.002)	-0.005*** (0.001)
Above65	0.002 (0.002)	0.005*** (0.002)	0.005** (0.002)	0.005** (0.002)
Obs	92,068	159,350	76,783	101,472
Adjusted R <sup>2</sup>	0.032	0.029	0.033	0.033
Mean	0.013	0.017	0.014	0.037
<i>Panel C: opting out</i>				
Above65 x Post	-0.028*** (0.003)	-0.028*** (0.003)	-0.027*** (0.004)	-0.028*** (0.003)
Above65	0.022*** (0.006)	0.020*** (0.005)	0.024*** (0.007)	0.026*** (0.006)
Obs	92,068	159,350	76,783	101,472
Adjusted R <sup>2</sup>	0.064	0.071	0.075	0.071
Mean	0.037	0.039	0.039	0.037
<i>Panel D: switching up</i>				
Above65 x Post	0.003*** (0.001)	0.004*** (0.001)	0.004*** (0.001)	0.002** (0.001)
Above65	-0.001 (0.001)	0.000 (0.001)	-0.002* (0.001)	-0.001 (0.001)
Obs	75,860	129,877	60,896	82,167
Adjusted R <sup>2</sup>	0.007	0.009	0.009	0.008
Mean	0.005	0.011	0.006	0.005
Individual controls	Yes	Yes	Yes	Yes
Plan FEs	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes

*Notes:* The table shows robustness tests with respect to key variable measures and alternative samples for the DID design. Dependent variables are indicators of enrolling in type P plans in Panel A, switching down in Panel B, opting out in Panel C, and switching up in Panel D. The sample age is between 60 and 69. Type C enrollees are excluded from all samples. In addition, first-time enrollees are excluded from the samples in Panels B and C, and enrollees in type P plans are further excluded from the sample in Panel D. *Above65* indicates that the individual is age 65 or above at the time of enrollment. Column (1) uses a sample with treatment status matching based on propensity score matching (PSM), nearest-neighbor (NN) with one neighbor; and Column (2) shows results including individuals who re-enroll in a plan before its termination. Column (3) restricts the sample to those who never used other family members' MediSave, and the last column restricts the sample to those who have had no inpatient stays in the past three years. Standard errors clustered at age level are in parentheses, \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

**Table B11** RD estimates: Heterogeneous effects by wealth levels

	By flat area		By flat type		By housing price	
	(1)	(2)	(3)	(4)	(5)	(6)
	Below average	Above average	4 rooms or below	5 rooms or above	Below average	Above average
<i>Panel A: enrolling in type P plans</i>						
Above 50	-0.018*** (0.002)	-0.021*** (0.001)	-0.023*** (0.002)	-0.021*** (0.001)	-0.024*** (0.002)	-0.019*** (0.002)
Obs	82,760	104,504	48,148	84,143	71,431	63,477
Adjusted R <sup>2</sup>	0.917	0.912	0.910	0.912	0.912	0.910
Mean	0.481	0.398	0.444	0.393	0.411	0.410
<i>Panel B: switching down from type P plans</i>						
Above50	0.040*** (0.002)	0.024*** (0.002)	0.042*** (0.003)	0.035*** (0.003)	0.045*** (0.002)	0.034*** (0.004)
Obs	41,566	39,345	33,028	21,290	26,035	29,252
Adjusted R <sup>2</sup>	0.052	0.05	0.054	0.053	0.057	0.052
Mean	0.032	0.021	0.033	0.027	0.031	0.03
<i>Panel C: opting out of IPs from type P plans</i>						
Above50	0.069*** (0.005)	0.057*** (0.003)	0.069*** (0.005)	0.070*** (0.006)	0.073*** (0.005)	0.065*** (0.006)
Obs	41,566	39,345	33,028	21,290	26,035	29,252
Adjusted R <sup>2</sup>	0.183	0.17	0.185	0.175	0.172	0.186
Mean	0.035	0.027	0.035	0.032	0.033	0.034
<i>Panel D: switching up from type A plans</i>						
Above50	-0.004*** (0.001)	-0.003* (0.002)	-0.004*** (0.001)	-0.002** (0.001)	-0.004** (0.002)	-0.003* (0.002)
Obs	66,561	48,773	53,281	30,108	39,921	45,131
Adjusted R <sup>2</sup>	0.123	0.165	0.118	0.141	0.125	0.128
Mean	0.012	0.015	0.011	0.014	0.012	0.012
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Plan FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes

*Notes:* This table shows heterogeneity tests for the RD analysis in subsamples split based on three housing features. Dependent variables are indicators of enrolling in type P plans in Panel A, switching down in Panel B, opting out in Panel C, and switching up in Panel D; the samples are all enrollees in Panel A, enrollees in type P plans in Panels B and C, and enrollees in type A plans in Panel D. The sample in this test only includes individuals with public housing. Approximate floor area includes any recess area purchased, space-adding item under HDB's upgrading programs, or roof terrace. Housing price is the resale price per square meter. Flats of type 5 rooms or above refer to 5-room flats, executive flats, and multi-generation flats. Standard errors clustered at age level are in parentheses, \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

**Table B12** DID estimates: Heterogeneous effects by wealth levels

	By flat area		By flat type		By housing price	
	(1) Below average	(2) Above average	(3) 4 rooms or below	(4) 5 rooms or above	(5) Below average	(6) Above average
<i>Panel A: enrolling in type P plans</i>						
Above65 x Post	0.006*** (0.002)	0.003** (0.002)	0.006*** (0.002)	0.004*** (0.002)	0.003** (0.001)	0.006*** (0.002)
Above65	-0.004*** (0.002)	-0.003 (0.002)	-0.003 (0.002)	-0.003 (0.002)	-0.002 (0.002)	-0.004** (0.002)
Obs	70,038	63,943	35,183	61,344	47,896	48,631
Adjusted R <sup>2</sup>	0.942	0.928	0.933	0.924	0.917	0.936
Mean	0.223	0.192	0.175	0.149	0.002	0.178
<i>Panel B: switching down</i>						
Above65 x Post	-0.005** (0.002)	-0.004* (0.002)	-0.005* (0.003)	-0.005** (0.002)	-0.005** (0.002)	-0.005** (0.002)
Above65	0.005** (0.002)	0.003 (0.002)	0.000 (0.003)	0.002 (0.002)	0.003 (0.003)	0.003 (0.003)
Obs	65,512	67,665	32,933	56,263	40,276	52,988
Adjusted R <sup>2</sup>	0.062	0.081	0.080	0.080	0.080	0.080
Mean	0.012	0.015	0.014	0.015	0.015	0.015
<i>Panel C: opting out</i>						
Above65 x Post	-0.006*** (0.002)	-0.005** (0.002)	-0.008** (0.003)	-0.007*** (0.003)	-0.008** (0.003)	-0.008** (0.003)
Above65	0.006** (0.003)	0.004 (0.003)	0.009** (0.004)	0.007** (0.003)	0.008** (0.004)	0.008** (0.004)
Obs	65,512	67,665	32,933	56,263	40,276	52,988
Adjusted R <sup>2</sup>	0.200	0.205	0.200	0.213	0.199	0.199
Mean	0.027	0.029	0.032	0.030	0.031	0.031
<i>Panel D: switching up</i>						
Above65 x Post	0.004** (0.001)	0.002** (0.001)	0.004** (0.002)	0.003** (0.001)	0.004*** (0.002)	0.003* (0.001)
Above65	-0.001 (0.002)	-0.003*** (0.001)	-0.003* (0.002)	-0.002 (0.001)	-0.004*** (0.001)	-0.001 (0.001)
Obs	49,427	56,059	26,540	46,786	32,746	43,971
Adjusted R <sup>2</sup>	0.081	0.054	0.058	0.055	0.058	0.055
Mean	0.007	0.005	0.006	0.005	0.005	0.005
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Plan FEs	Yes	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes	Yes

*Notes:* This table shows heterogeneity tests for the DID estimates in subsamples split based on three housing features. Dependent variables are indicators of enrolment in type P plans in Panel A, switching down in Panel B, opting out in Panel C, and switching up in Panel D. The sample age is between 60 and 69. The sample in this test is restricted to those with public housing. Type C enrollees are excluded from all samples. In addition, the first-time enrollees are excluded from the samples in Panels B and C, and enrollees in type P plans are further excluded from the sample in Panel D. Approximate floor area includes any recess area purchased, space-adding item under HDB's upgrading programs, or roof terrace. Housing price is the resale price per square meter. *Below/above* indicates that the flat area (housing price) is below/above the sample average. Flats of type 5 rooms or above refer to 5-room flats, executive flats, and multi-generation flats. Standard errors clustered at age level are in parentheses, \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .