The Impact of a Billing System on Healthcare Utilization: the Case of the Thai Civil Servant Medical Benefit Scheme

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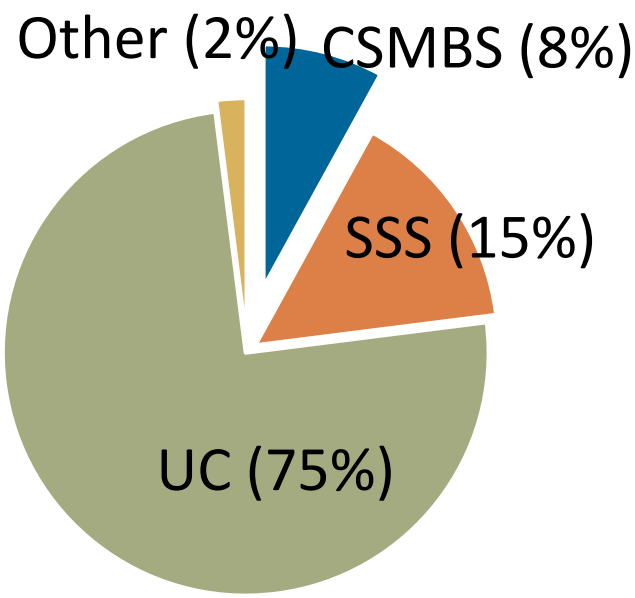
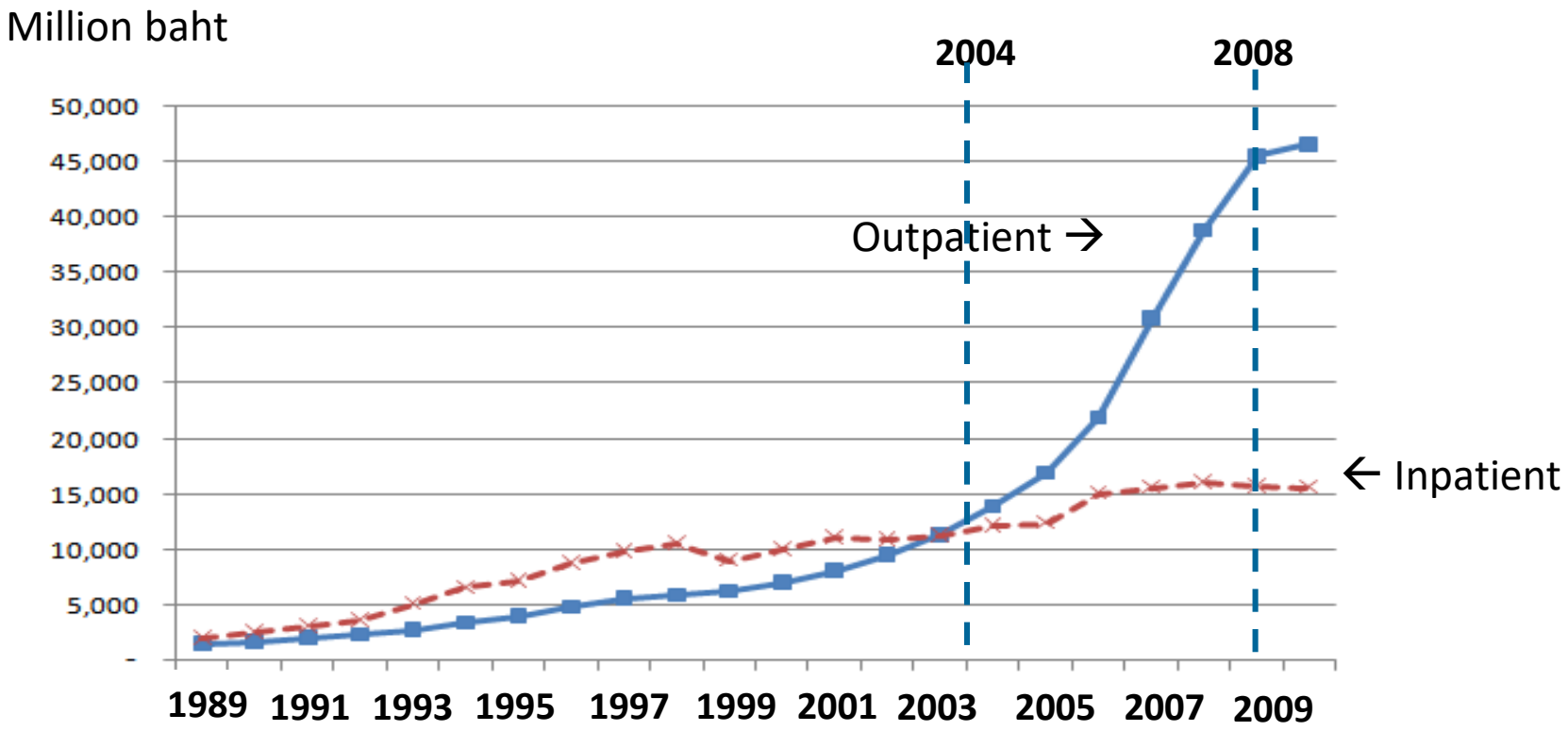
The Thai Health Insurance System – three public schemes

	Social Security Scheme (SSS)	Civil Servant Medical Benefit Scheme (CSMBS)	Universal Health Coverage Scheme (UC)
Beneficiary	Mainly employees in formal sector	Civil servants and their family (parents & children)	Thai citizens (not in SSS and CSMBS)
Expenditure per capita (2013)	3,201 Baht (USD 100)	11,182 Baht (USD 343)	2,726 Baht (USD 85)
Payment to providers	Providers are mostly public hospitals (medical staff are paid by salary)		
Inpatient	Diagnostic Related Group (DRG)	Fee for services (& changed to DRG)	DRG
Outpatient	Capitation	Fee for services	Capitation



The Civil Servant Medical Benefit Scheme's aggregate expenditure

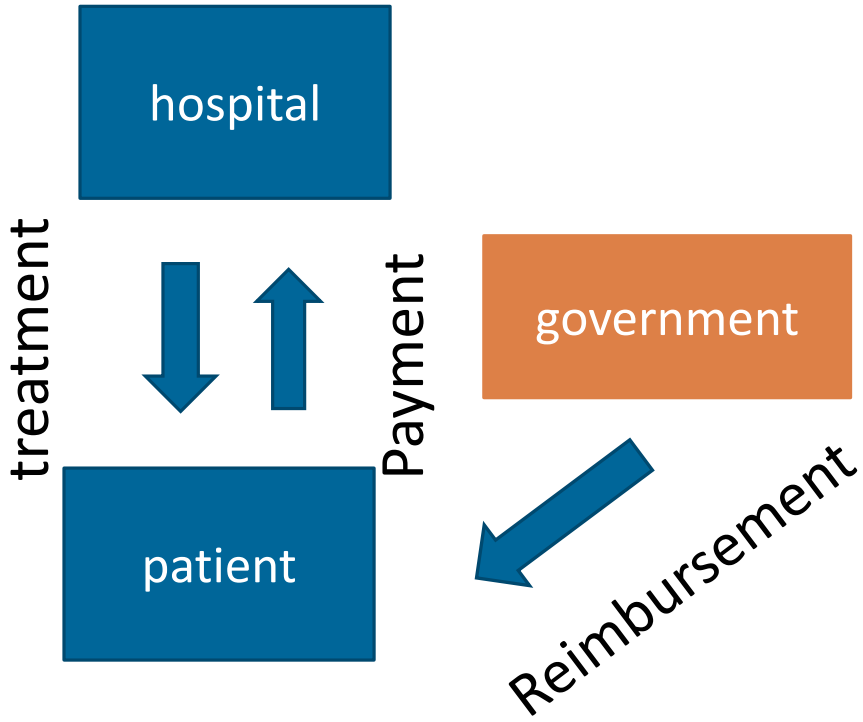


2003: Outpatient care – introduced the Direct Billing Payment program (DBP)

The Civil Servant Medical Billing Scheme outpatients' Billing system

Before 2003:

patients pay upon treatment,
get reimbursed later



- no co-payment
- cash-constraint patients
  may not receive necessary cares

The Civil Servant Medical Billing Scheme outpatients' Billing system

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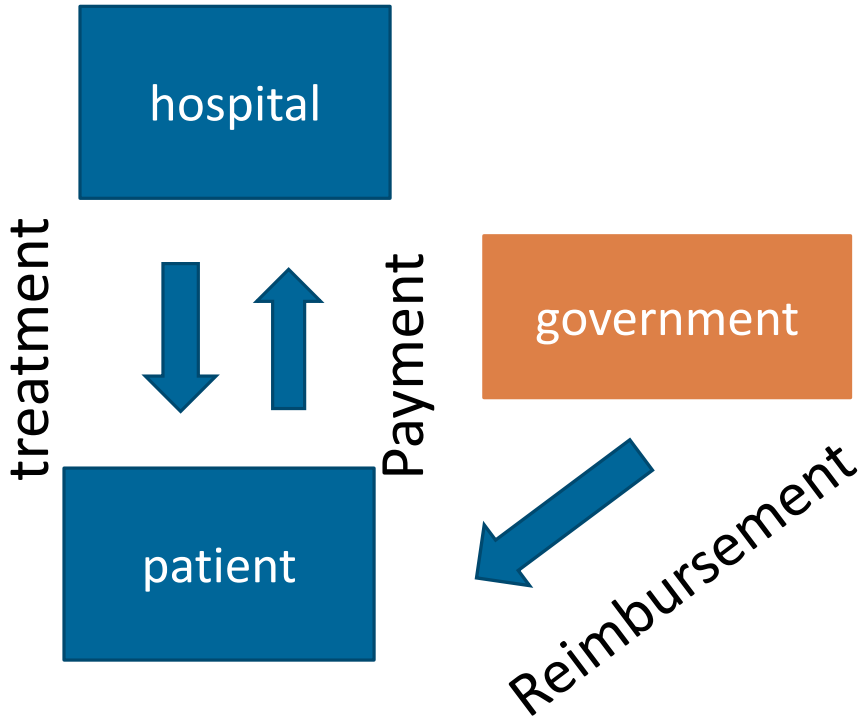
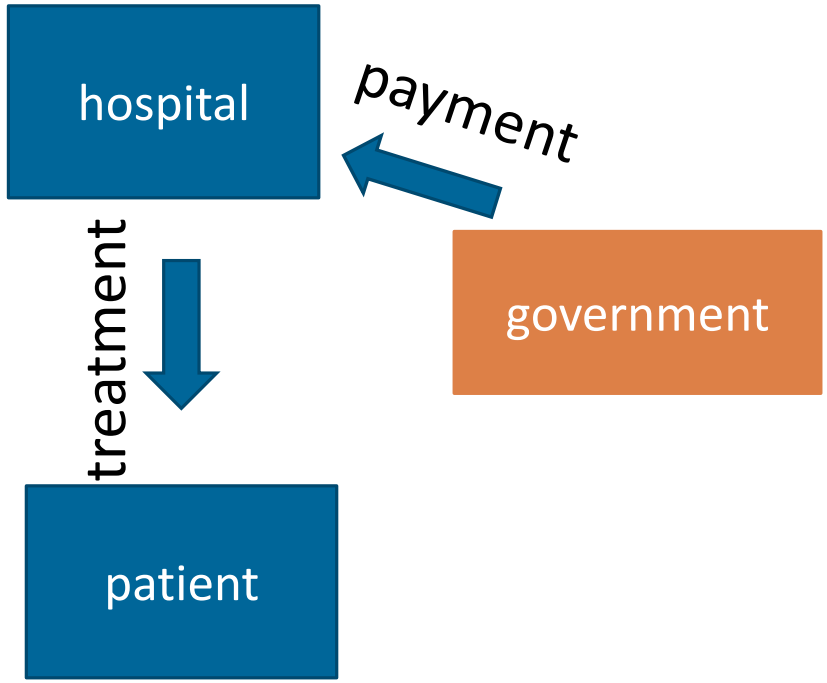


After 2003:

Direct Billing Payment Program (DBP)
no upfront payment



Why is this interesting?

- Most health insurance studies look at cost-sharing tools, but non-price mechanism is rarely discussed.

- Thailand: already concluded that the program led to the dramatic increase in the government expenditure but none have carefully teased out the effect.

Preview

- Patient-level panel data from one large hospital, covering both before and after the Direct Billing Payment Program was in place.
- Fixed effects model
  on average, the program significantly affect healthcare utilization through multiple channels, but the effects are moderate.
- Two extensions:
  Do the effects persist over time?
  Do the patients whom the program intended to help get help?

Previous studies on health insurance and healthcare utilization

A large body of literature on the effect of cost-sharing measures on healthcare demand (Zweifel & Manning, 2000)

- The US RAND health insurance experiment (Manning et al, 1987; Newhouse 1993)
- Other empirical studies: an increase in the cost-sharing level …
  - decreases outpatient visits (Chandra *et al.*, 2010; Winkelmann, 2004 and 2006; Chiappori *et al.*, 1998; and Brot-Goldberg, 2017)
  - decreases prescription drug expenditure (Rudholm, 2005; Granlund, 2009)
  - has more negative impacts among the poor (Beck, 1974; Lostao *et al.*, 2007)

How should the introduction of the Direct Billing Program affect healthcare utilization?

- There is no change in price (zero cost-sharing both before and after the program)

- If the moral hazard exists, it should be there at the first place.

  But the moral hazard could be suppressed by cash-constraint and other factors.

- *We are not aware of any health insurance studies examine the impact of a policy change like the DBP (pure non-price change)*

Previous studies on mail-in rebates vs. instant discount

- Mail-in rebate: consumers pay the full price first & mail the form to get the rebate
- The Direct Billing Payment program:
  similar to replacing the mail-in rebate with the instant discount of the same amount

- Economics and psychology predicts that a mailed-in rebate is less preferred:
  - Consumer's high discount rate (Pyone and Isen, 2011)
  - Cash constraints and costs associated with the rebate process (Gilpatric, 2009; Tat and Schwepker, 1998)
  - Prospect Theory/Loss Aversion (Kahneman and Tversky, 1979)
  - Empirical evidences (Epley *et al.*, 2006; Revelt and Train, 1998; Wasi and Carson, 2013)

- *Predict that non cash-constraint patients might as well increase their utilization*

Previous studies on the Direct Billing Payment Program (DBP)

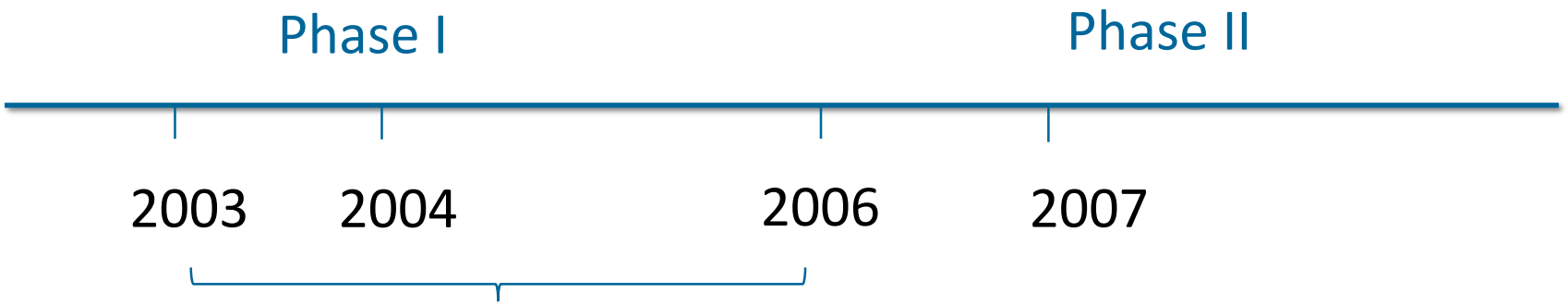
- Mostly compare prescription drug charges before and after the DBP
  - Pongchareonsuk and Pattanaprateep (2009)
  - Dilokthornsakul *et al.*(2010)

- Some analyze CSMBS expenditure after DBP (likely because of data availability)
  - Siamwalla *et al.* (2011)
  - Limwattananon *et al*. (2011)

- ❑ *None carefully teased out the causal effects of the DBP.*

The Introduction of the Direct Billing Payment Program

The program was phase-in over the period of four years.



- 30 pilot hospitals (not started at the same time)
- only “chronic patients” are eligible.
- whether and when to enroll are patients’ choices

- all public hospitals
- all CSMBS are eligible to enroll.

This paper looks at the first phase.

Data

- Patient-level database from a large public hospital

  - outside the Bangkok Metropolitan area

  - starting Direct Billing Payment program in June 2004

- Advantages of using administrative data vs. survey data

  - relatively free of self-report error

  - charges are observed even if patients do not pay at the hospital (survey only asked about out-of-pocket expense)

Data

- Available information
  - patients' characteristics:
    - age, gender, occupation, their health insurance
  - for each outpatient visit:
    - date, diagnostics, total charge, charges by types

- Sample
  - CSMBS patients (UC and SSS have totally different payment systems)
  - eligible for the DBP since the first phase (four chronic diseases, regular treated)
  - drop referred patients & those who were likely to move out of the area

Data

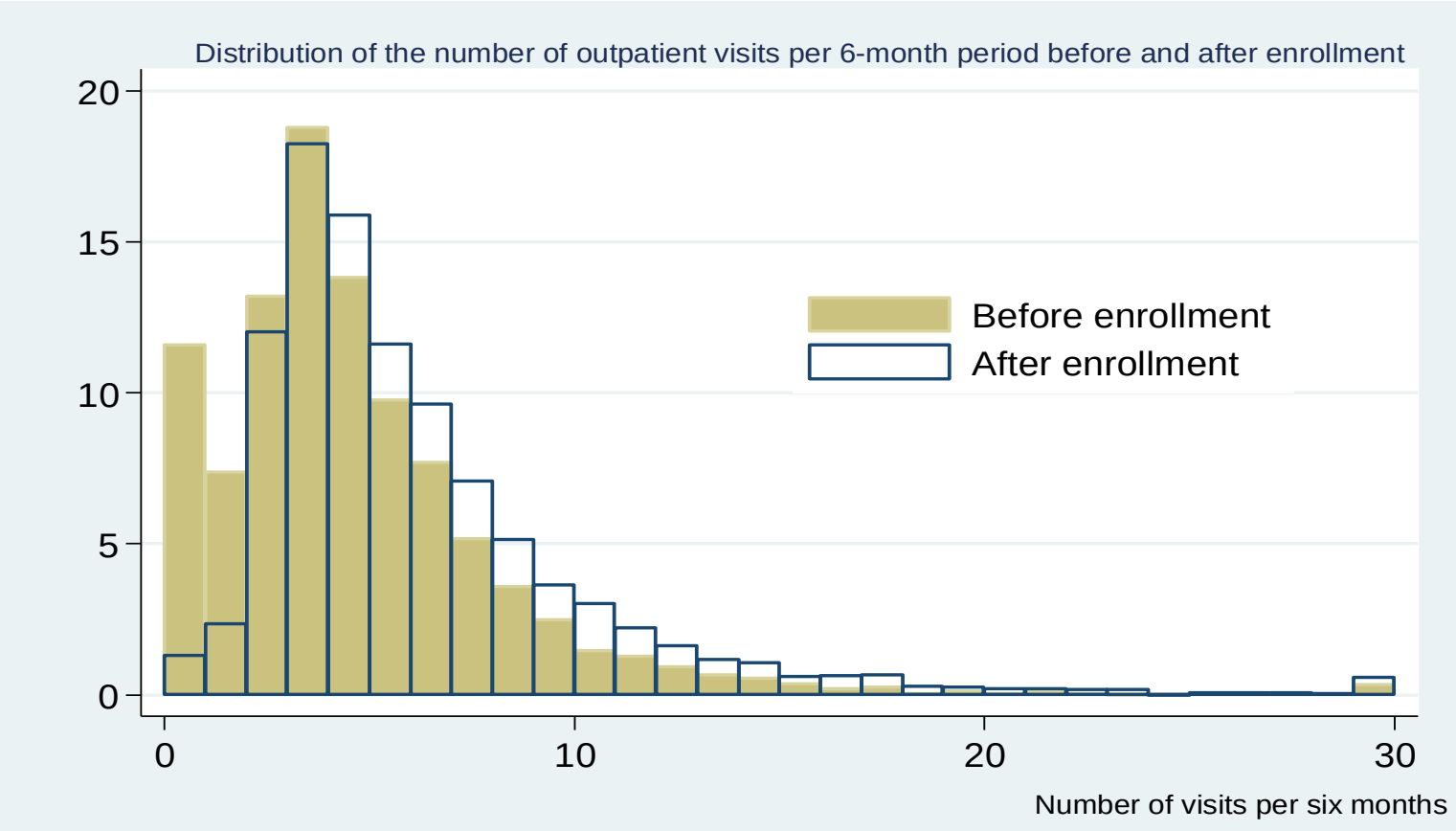
- Define time period = 6-month

- Three measures of outpatient care utilization
  - number of outpatient visits (extensive margin)
  - total charge per visit (intensive margin)
  - share of prescription drugs charge from total charge

  } Treatment intensity

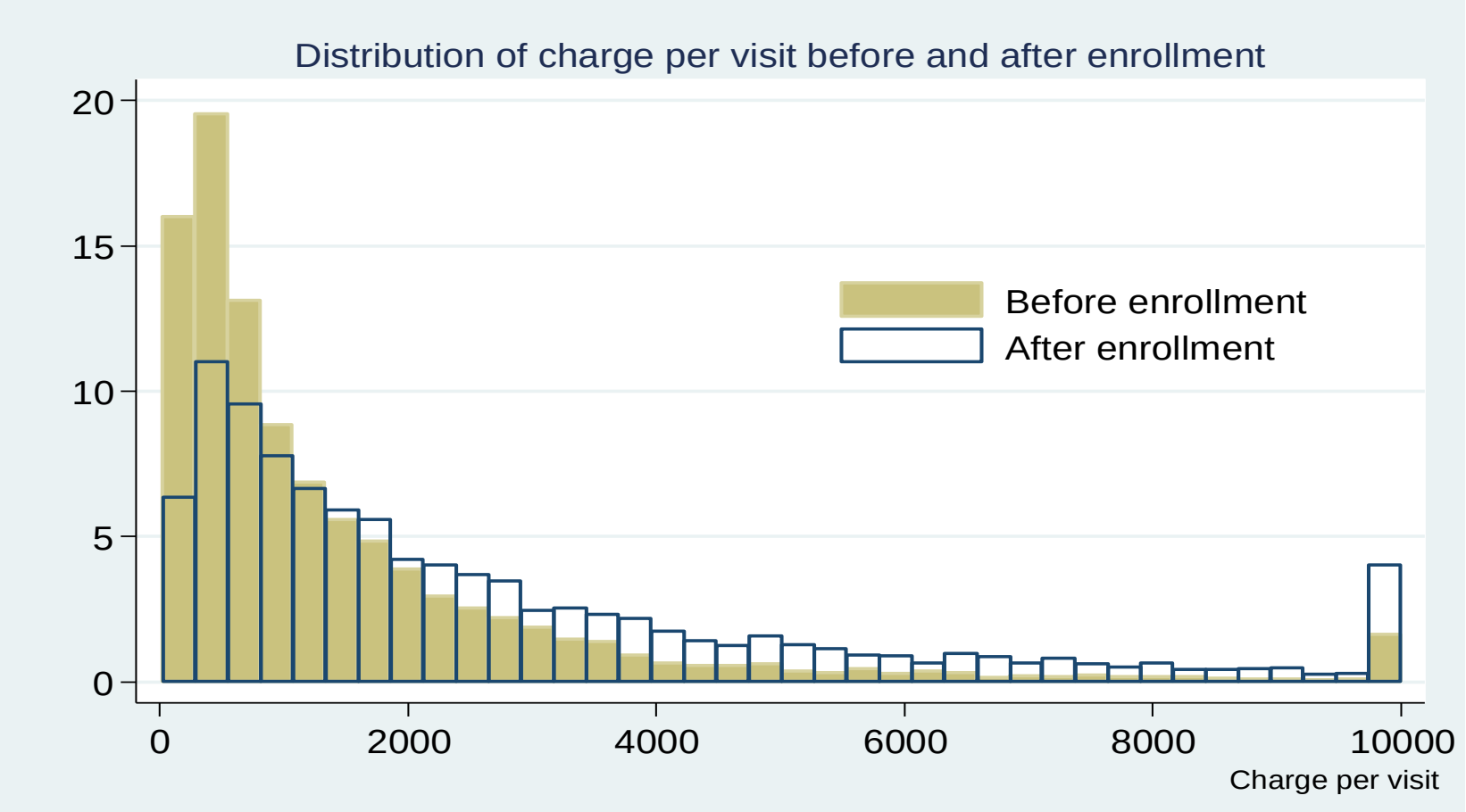
- The number of final observations
  = 1462 patients × 10 six-month periods (between June 2003-May 2007)

Distribution of the Number of Outpatient Visits per six-month period



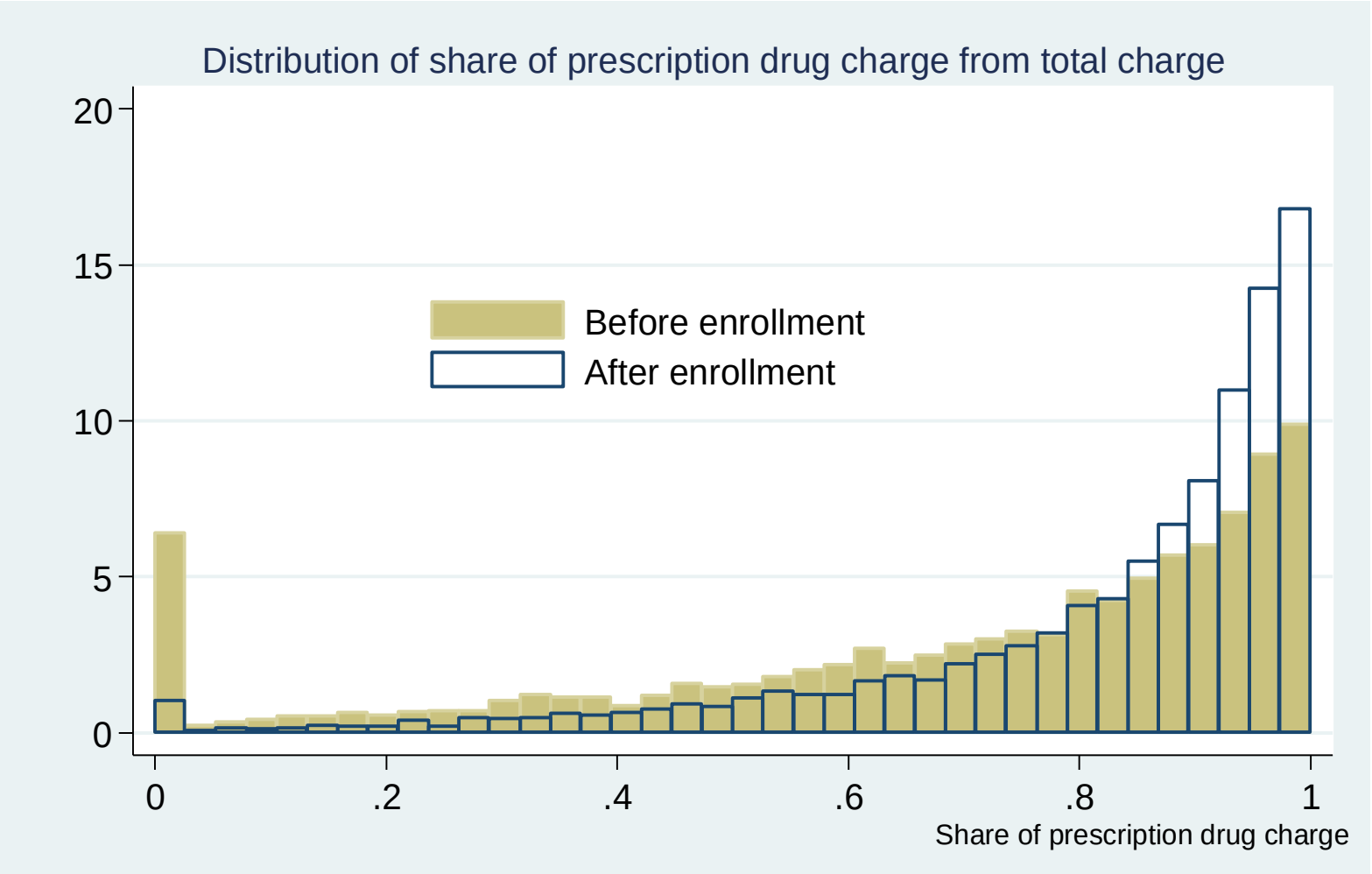
Average number of visits	
Before enrollment	4.6 times
After enrollment	5.7 times

Distribution of Outpatient Charge per Visit



Average charge per visit	
Before enrollment	1,491 baht
After enrollment	2,776 baht

The share of prescription drug charge



Average %drug charge	
Before enrollment	71%
After enrollment	81%

Average number of visits per six month by patients' enrollment date

Average number of visits per 6 months	Enrolled Jun-Nov 04	Enrolled Dec 04-May 05	Enrolled Jun-Nov 05	Enrolled Dec 05-May 06	Enrolled Jun-Sep 06	Never enroll
before enrollment	5.3	4.5	4.4	4.4	3.8	3.9
after enrollment	5.9	5.6	5.5	5.7	4.7	

Average number of visits per six month by patients' enrollment date

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before enrollment	5.3	4.5	4.4	4.4	3.8	3.9
after enrollment	5.9	5.6	5.5	5.7	4.7	

- Patients who enrolled during the first six month have the highest numbers of visits both before and after enrollment

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For all groups, the numbers of visit increase after enrollment.

Average charge per visit and share of prescription drug charge by patients' enrollment date

treatment intensity is also higher after enrollment, and higher among those enrolling sooner.

Average charge per visit (baht)	Enrolled Jun-Nov 04	Enrolled Dec 04-May 05	Enrolled Jun-Nov 05	Enrolled Dec 05-May 06	Enrolled Jun-Sep 06	Never enroll
before enrollment	1,586	1,373	1,142	1,322	1,001	1,689
after enrollment	3,107	2,610	2,494	2,373	2,131	

Average charge per visit and share of prescription drug charge by patients' enrollment date

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Average share of prescription drug charge (%)	Enrolled Jun-Nov 04	Enrolled Dec 04-May 05	Enrolled Jun-Nov 05	Enrolled Dec 05-May 06	Enrolled Jun-Sep 06	Never enroll
before enrollment	78%	76%	70%	71%	67%	62%
after enrollment	83%	82%	80%	76%	74%	

Other sample characteristics by CS patients' enrollment date

	Enrolled Jun-Nov 04	Enrolled Dec04-May 05	Enrolled Jun-Nov 05	Enrolled Dec05-May06	Enrolled Jun-Sep 06	Never enroll
Age	64	65	66	64	67	62
Distance to the hospital						
Same district as the hospital	0.67	0.51	0.61	0.54	0.44	0.45
Different district, but same province as the hospital	0.27	0.41	0.31	0.38	0.44	0.45
Different province	0.05	0.09	0.08	0.08	0.12	0.1
Illnesses						
Diabetes mellitus	0.58	0.6	0.47	0.47	0.41	0.47
Hypertension	0.84	0.85	0.88	0.84	0.91	0.78
Circulatory system/heart diseases	0.31	0.27	0.24	0.23	0.3	0.26
Cerebrovascular diseases	0.13	0.09	0.13	0.1	0.11	0.12

Other characteristics: occupation, gender, more detailed illnesses.

Empirical specification

- Number of outpatient visits : non-negative integer → Poisson model
- Charge per visit : positive with long tails → log-linear specification
- Share of prescription drug charge → linear specification

Estimate two versions:

I. no fixed effects, but include observed characteristics
& use enrollment date dummies to capture unobserved heterogeneity

II. with fixed effects, no time-invariant characteristics

All models include time dummies and illnesses.

Main results – average effects of the Direct Billing Payment program

Explanatory variable \ Dependent variable	Number of visits (marginal effects)		Charge per visit *(*100=%change)*		Share of prescription drug charge	
	No FE	**FE**	**No FE**	**FE**	**No FE**	**FE**
1 if enroll	0.855**	0.908**	0.076*	0.099**	0.016*	0.024**
Time dummies (omitted Jun02-Nov03)						
Dec 03 - May 04	-0.067	-0.071	0.127**	0.141**	0.017*	0.017**
Jun04 - Nov 04	-0.173	-0.201	0.152**	0.160**	0.019*	0.016*
Dec 04- May 05	-0.627**	-0.649**	0.360**	0.379**	0.039**	0.038**
Jun 05 - Nov 05	-0.957**	-0.995**	0.399**	0.430**	0.049**	0.045**
Dec 05 - May 06	-0.737**	-0.78**	0.426**	0.476**	0.034**	0.036**
Jun 06 - Nov 06	-0.91**	-0.892**	0.539**	0.596**	0.047**	0.049**
Dec 06 - May 07	-0.854**	-0.94**	0.644**	0.715**	0.054**	0.059**
Jun 07 - Nov 07	-0.572**	-0.661**	0.573**	0.664**	0.044**	0.050**
Dec 07 - May 08	-1.125**	-1.221**	0.600**	0.720**	0.050**	0.060**

Main results

- DBP increases healthcare utilization through both the extensive & intensive margins
- The magnitudes are much lower than what a simple before-and-after difference suggests:

Measurement	The estimated impact of DBP	Before-and-after difference
Charge per Visits	+7.6 to 9.9 %	+86%
Share of Drugs charge	+1.6% to 2.4%	+10%

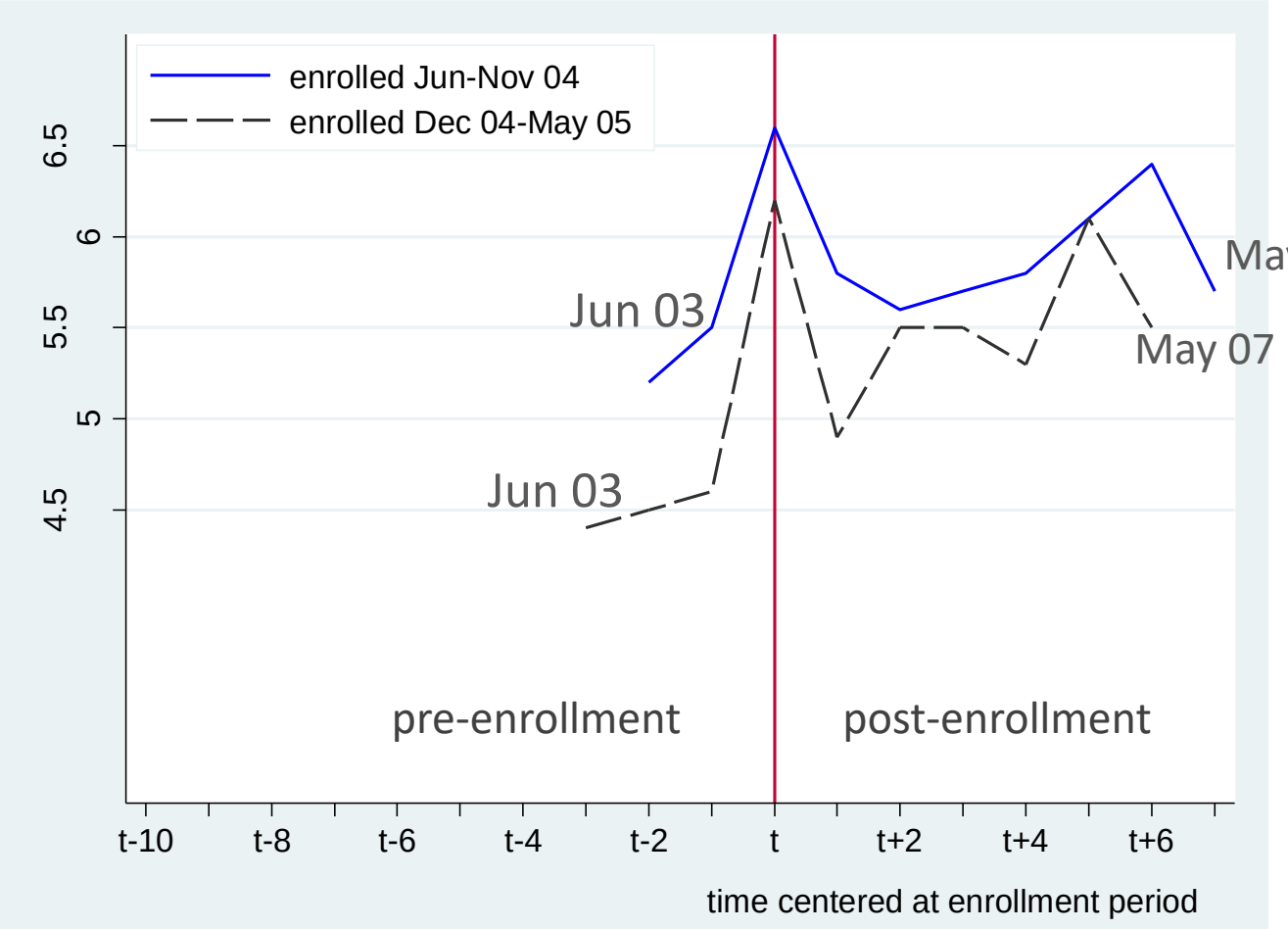
- Time dummies capture a large fraction of the increase in charge and %drug charge.
  → drug price inflation?
  → changes in medical practices common among all CS outpatients?
  (cross-subsidizing the other two public schemes or CS inpatients switched to DRG earlier?)

Two Extensions

- Do the effects persist over time?
- Do the patients whom the program intended to help get help?

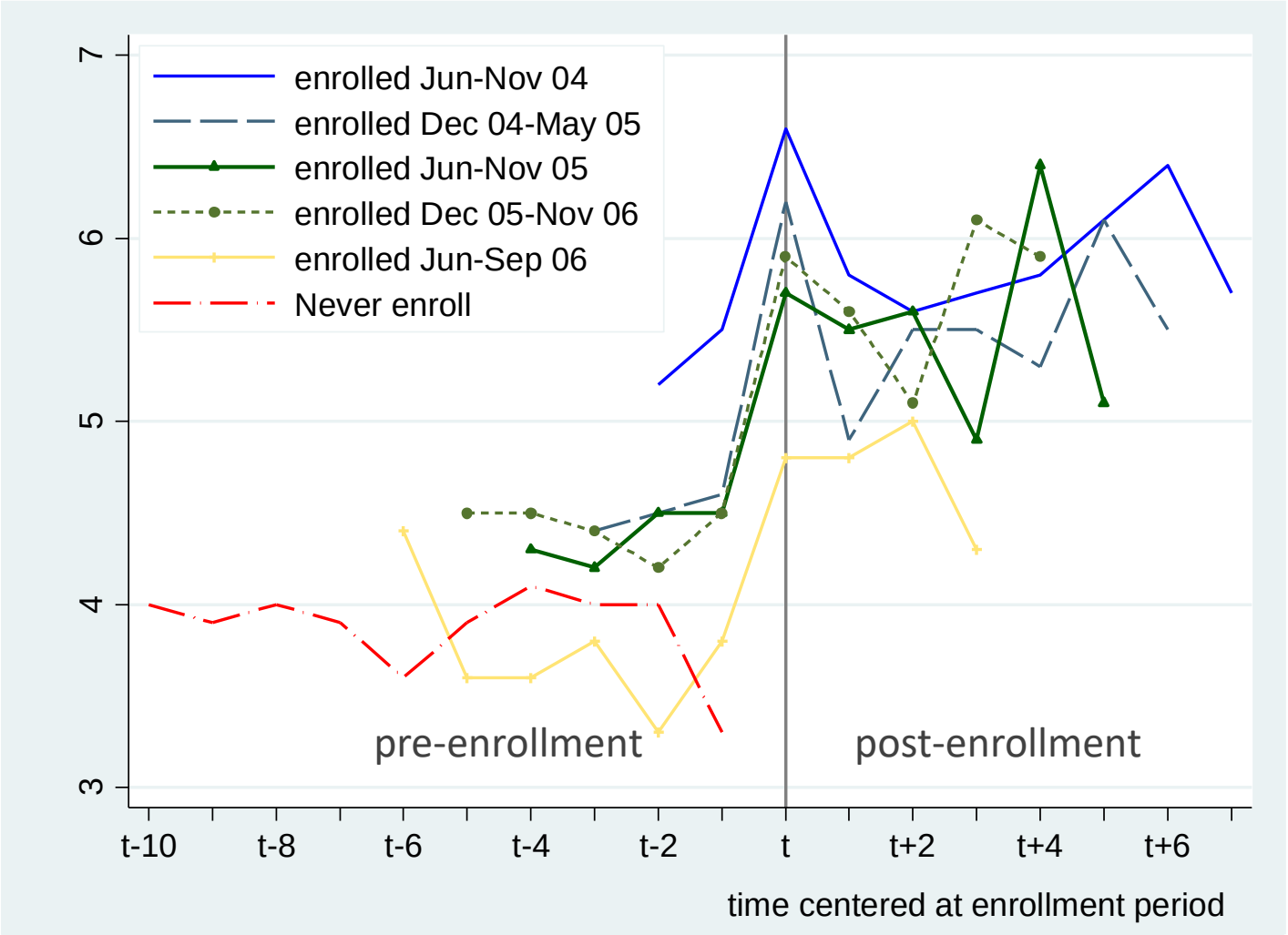
Extension1: Do effects persist over time?

Average number of visits pre- and post- enrollment



Enrollment period	Jun-Nov 04	Dec04-May05
t-3		Jun03–Nov03
t-2	Jun03–Nov03	Dec03-May04
t-1	Dec03-May04	Jun04-Nov04
t	Jun04-Nov04	Dec04-May05
t+1	Dec04-May05	Jun05-Nov05
t+2		
…		
t+6		Dec06-May07
t+7	Dec06-May07	

Average number of visits pre- and post- enrollment by patients' enrollment date



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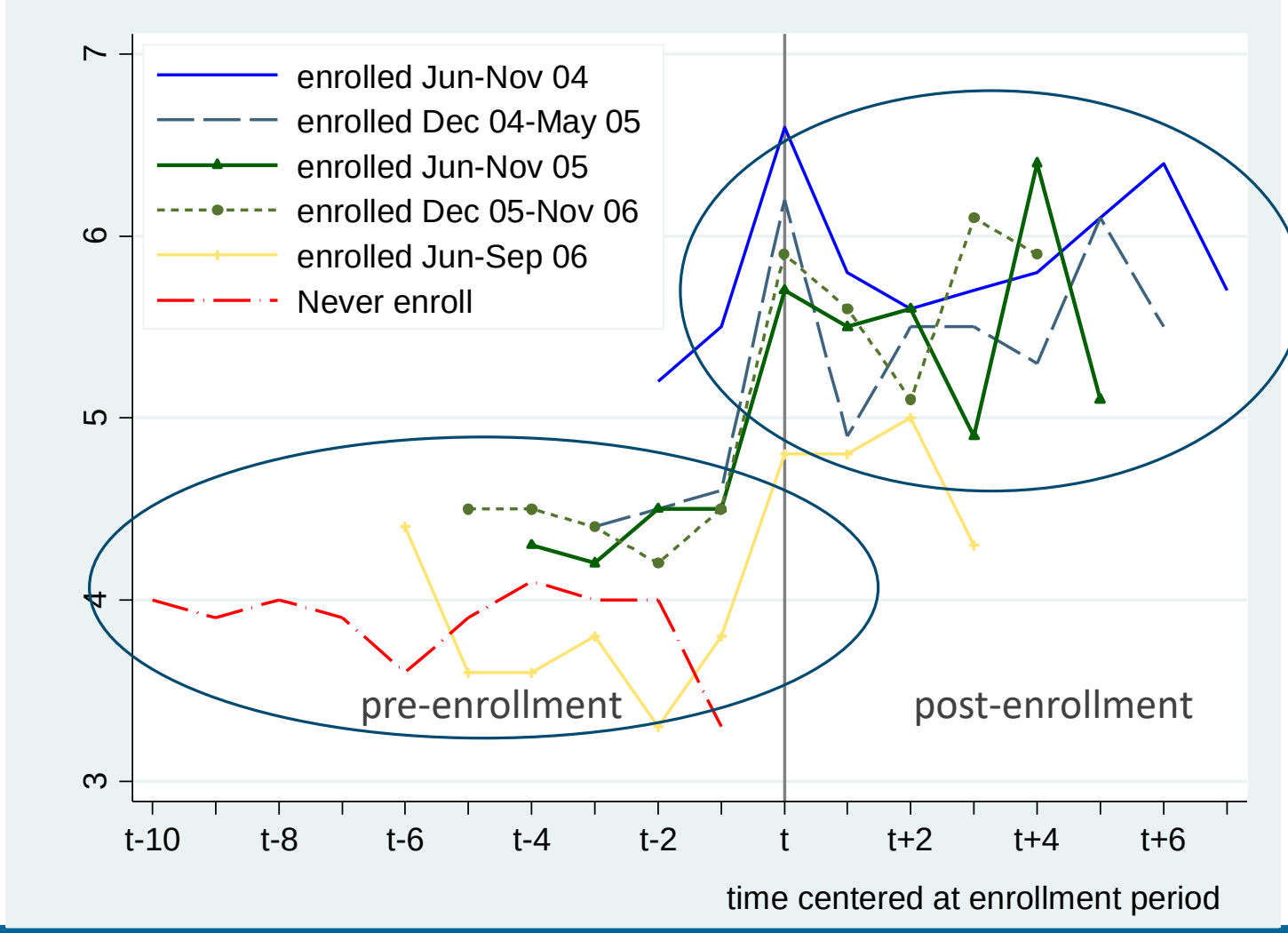
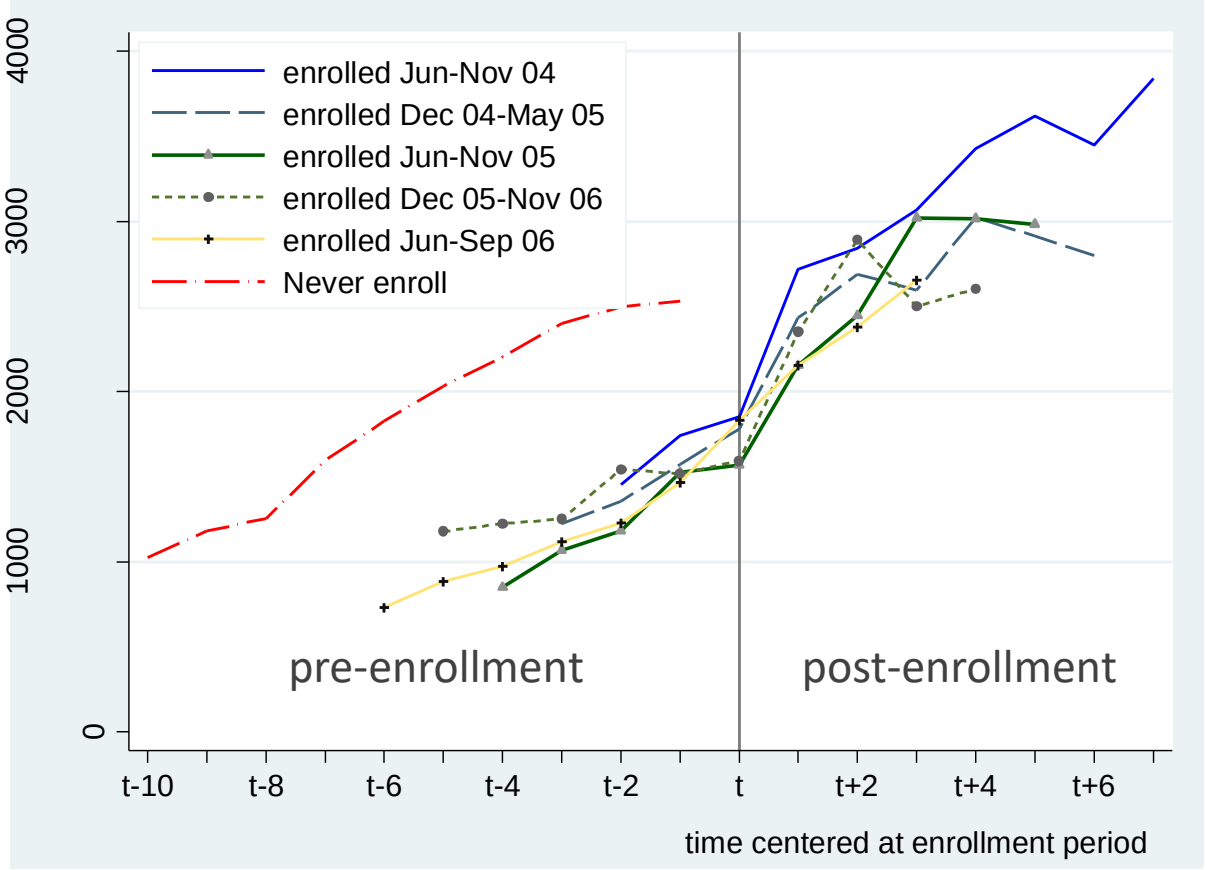
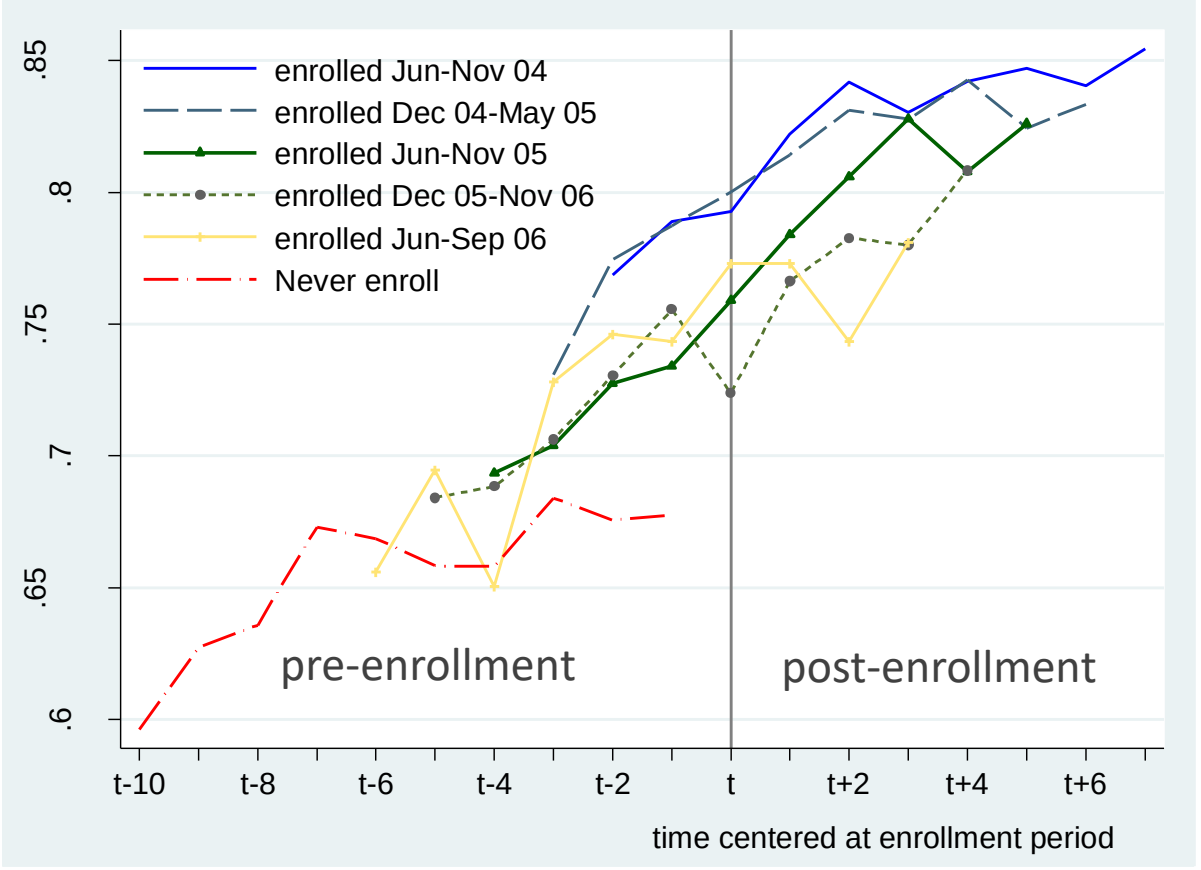


- The average numbers of visits clearly jumped to a new level after enrollment.
- Not much change for the never enroll group.

Average charge per visit



Share of prescription drug charge



Both exhibit positive trends even patients before enrollment

The persistency of DBP effects

Estimated effects of DBP relative to before enrollment	The number of visits	Charge per visit *(%change)*	Share of prescription drug charge
Time elapsed since enrollment			
0-6 months	1.428**	-0.047	0.013
7-12 months	0.645**	0.191**	0.028**
13-18 months	0.724**	0.207**	0.038**
19-24 months	0.721**	0.191**	0.033**
25 months+	0.813**	0.154**	0.025*

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25 months+	0.813**	0.154**	0.025*
Average effects	0.908	0.099	.024

- Average effects mask heterogeneity across time.
- Why so? Change in the patient mix?

Extension2: Do people who the program intended to help get helped?

- The program intended to help beneficiaries with cash-constraint but income or wealth are not observed.
- Can we proxy under-treated patients by low numbers of visits before enrollment?
  - some of those who rarely visited the hospital might not be sick.
- Ideally, wish to compare the change in behaviors of those with the same illnesses but different levels of cash-constraint

Classifying patients based on their illnesses & utilization before enrollment

- observations before enrollment only
- estimate the visit model based on illnesses and predict the number of visits

residual = actual number of visits - predicted number of visits

(+) residual → visits more often
(-) residual → less often

} than the average patients with the same illnesses

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- estimate the visit model based on illnesses and predict the number of visits

residual = actual number of visits - predicted number of visits

(+) residual → visits more often
(-) residual → less often

} than the average patients with the same illnesses

- estimate the charge per visit model based on illnesses and predict charge per visit

residual = actual charge – predicted charge

(+) residual → charge per visit was higher
(-) residual → lower

} than the average patients with the same illnesses

Classifying patients based on their illnesses & utilization before enrollment

Patients can be classified into four groups based on their residuals in two models:

group 1: Lower visit, lower charge
group 2: Lower visit, higher charge
group 3: higher visit, lower charge
group 4: higher visit, higher charge

} compared to the average patient with the same illnesses

➢ Group 1 is most likely cash-constraint patients.

Estimated effects of DBP by patient types

	The number of visits	Charge per visit *(*100=%change)*	Share of prescription drug charge
Compared to average patients with same illnesses			
Lower visit, lower charge	2.51**	0.33**	0.076**
Lower visit, higher charge	2.23**	-0.22**	-0.024*
Higher visit, lower charge	0.32	0.28**	0.060**
Higher visit, higher charge	0.27	-0.07	-0.023**
Average effects	0.908	0.099	.024

Classifying patients based on their illnesses & utilization before enrollment

- Also uses another alternative method

  use residuals from a total charge model to classify patients
  total charge = no. of visits x charge per visit

- Consistent results:

  the likely cash-constrained patients increase their utilization more proportionally

Conclusions & discussion

- We find evidence that a change of a billing system can affect healthcare utilization – even if there is no change in price.

- The impacts occurred through multiple channels:
  the number of visits increases,
  for each visit, the charge per visit & share of prescription drug charge increase.

- The magnitude of the average effect is moderate, but persistent.

- The results suggest that the likely-cash-constrained patients increase their healthcare utilization more proportionally after the program launched.

Conclusions & discussion

- Limitations:
  - The scheme considered here is zero cost-sharing.
    (may expect less impact for positive cost-sharing scheme.)
  - The results are estimated from chronic patients in one public hospital.
  - The method used to identify the likely cash-constraint patients is imperfect.

- Recent changes of CSMBS:
  - limit certain types of drugs or services
  - use national ID when visiting hospitals

  but there is still no cost-sharing measures from demand-side or supply-side.

- Future work may try to assess to which extent the increase in utilization is worth or wasteful.

Some more details

Poisson Regression model for number of visits

The probability that the number of visits $(y_{it}) = j$ is given by:

$$f(y_{it}|\mu_{it}) = \frac{e^{-\mu_{it}}\mu_{it}^{y_{it}}}{y_{it}!} \qquad j = 0, 1,2,\ldots;\ i=1,\ldots,n\ ;\ t=1,\ldots,10.$$

where y_{it} is drawn from a Poisson distribution with parameter μ_{it}.

The expected number of visits per period, μ_{it}, is specified to be a function of covariates.

Poisson Regression model for number of visits

The expected number of visits, μ_{it}, is specified to be a function of covariates.

- D_{it} 1 if patient *i* enrolls to DBP at period *t*
- γ_t time dummies
- Z_i time-invariant characteristics, including enrollment date
- X_{it} characteristics which vary across times -- illnesses

Model I: use observed characteristics to control for heterogeneity (No Fixed effects)

$$E[y_{it}|\alpha, \gamma_t, D_{it}, X, Z] = \mu_{it} = exp(\alpha + \gamma_t + \beta D_{it} + X_{it}\delta + Z_i\lambda)$$

Model II: Fixed effects model: α_i capture both observed and unobserved heterogeneity

$$E[y_{it}|\alpha_i, \gamma_t, D_{it}, X_{it}] = \mu_{it} = \alpha_i exp(\gamma_t + \beta D_{it} + X_{it}\delta)$$

Specifications for Charge per visit and share of prescription drug charge

Each observed outcome of person i at period t

$$y_{it} = \alpha_i + \gamma_t + \beta D_{it} + X_{it}\delta + \varepsilon_{it} \ , \qquad i=1,\ldots,n \ ; \ t=1,\ldots,10.$$

where y_{it} is either log(cost per visit) or % prescription drug charge

No Fixed effects model: $\alpha_i = \alpha + Z_i\lambda$

Fixed effects model: $\alpha_i = \alpha + Z_i\lambda + \eta_i$

(the unobserved factor of person i)

	Outpatient visits		*Charge per visit*		*Share of prescription drug charge*	
	No Fixed effects	*Fixed effects*	*No Fixed effects*	*Fixed effects*	*No Fixed effects*	*Fixed effects*
Diabetes mellitus	0.666**	0.58**	0.382**	0.128*	0.024*	0.009
	(0.104)	(0.217)	(0.044)	(0.056)	(0.010)	(0.012)
Hypertension	0.575**	0.729**	0.223**	0.123*	0.063**	0.031**
	(0.117)	(0.186)	(0.059)	(0.052)	(0.013)	(0.012)
Circulatory system or heart diseases	0.517**	1.047**	0.311**	0.211**	0.036**	0.048**
	(0.125)	(0.27)	(0.050)	(0.069)	(0.010)	(0.014)
Cerebrovascular diseases	0.492**	0.852**	0.288**	0.386**	0.044**	0.035*
	(0.161)	(0.295)	(0.067)	(0.102)	(0.014)	(0.016)
Renal failure or care involving dialysis	2.151**	0.66	0.505**	0.237**	0.022	0.029
	(0.663)	(0.376)	(0.087)	(0.085)	(0.015)	(0.017)
Rheumatoid arthritis	1.156*	1.036*	0.309*	-0.149	0.062**	-0.025
	(0.483)	(0.514)	(0.127)	(0.096)	(0.019)	(0.021)
Diarrhea and gastroenteritis	1.129**	0.659**	-0.247**	-0.098*	-0.025	-0.004
	(0.257)	(0.149)	(0.060)	(0.039)	(0.015)	(0.010)
Other infectious diseases	0.994**	0.808**	-0.108	-0.087	0.008	-0.001
	(0.311)	(0.207)	(0.063)	(0.051)	(0.018)	(0.015)
Malignant neoplasms or cancer	1.428**	1.458**	0.082	0.009	-0.034	-0.003
	(0.411)	(0.504)	(0.129)	(0.104)	(0.022)	(0.026)
Disorders of metabolism lipoprotein & lipidaemias	0.349**	0.351**	0.130**	0.051*	-0.001	-0.001
	(0.105)	(0.093)	(0.039)	(0.021)	(0.009)	(0.005)
Endocrine, nutritional & metabolic diseases	0.879**	0.599**	-0.028	-0.014	-0.040*	-0.027*
	(0.25)	(0.216)	(0.075)	(0.048)	(0.019)	(0.013)
Parkinson's disease	-0.018	0.732	0.743**	0.208	0.052	0.014
	(0.265)	(0.449)	(0.138)	(0.173)	(0.033)	(0.025)
Migraine or other headache syndromes	0.769*	0.849**	-0.367**	-0.154**	-0.034*	-0.016
	(0.34)	(0.309)	(0.087)	(0.056)	(0.017)	(0.014)
Other diseases of the nervous system	1.057*	0.479	0.146	-0.08	-0.012	-0.024
	(0.461)	(0.255)	(0.090)	(0.043)	(0.021)	(0.012)
Mental and behavioral disorders	1.689**	1.336**	0.12	0.089	0.058**	0.035**
	(0.358)	(0.399)	(0.075)	(0.055)	(0.022)	(0.011)
Dental caries	0.803**	0.555**	0.111	0.024	-0.047**	-0.048**
	(0.214)	(0.17)	(0.069)	(0.037)	(0.016)	(0.012)
Diseases of pulp & periapical tissues/gingivitis diseases	1.262**	1.039**	-0.218**	-0.132**	-0.069**	-0.060**
	(0.19)	(0.137)	(0.048)	(0.028)	(0.012)	(0.008)
Other oral diseases	0.924**	1.106**	-0.188**	-0.094*	-0.095**	-0.068**
	(0.249)	(0.189)	(0.064)	(0.038)	(0.017)	(0.013)
Functional dyspepsia Disorders of stomach	1.306**	1.012**	-0.120*	-0.026	-0.031*	-0.018*
	(0.233)	(0.158)	(0.058)	(0.038)	(0.014)	(0.009)
Disorders of esophagus	1.162**	0.829**	-0.06	-0.029	-0.048*	-0.013
	(0.198)	(0.15)	(0.062)	(0.040)	(0.019)	(0.010)
Cataracts	0.929**	0.726**	-0.203**	-0.131**	-0.037**	-0.020*
	(0.183)	(0.15)	(0.051)	(0.035)	(0.012)	(0.009)
Glaucoma	1.069**	0.924**	0.228**	0.164	0.060**	0.022
	(0.204)	(0.323)	(0.079)	(0.113)	(0.015)	(0.022)
Other disorders of eyes and ears	1.149**	0.937**	-0.221**	-0.138**	-0.016	0.009
	(0.299)	(0.233)	(0.081)	(0.050)	(0.020)	(0.014)
Acute cold and other URIs	1.301**	0.66**	-0.149**	-0.109**	0.013	-0.005
	(0.148)	(0.127)	(0.038)	(0.023)	(0.009)	(0.006)
Chronic lower respiratory diseases	0.867**	0.665**	0.034	-0.024	0.017	-0.004
	(0.139)	(0.196)	(0.059)	(0.054)	(0.012)	(0.011)
Gout	0.484*	0.718	0.044	0.186*	-0.001	0.032
	(0.197)	(0.386)	(0.074)	(0.091)	(0.015)	(0.023)
Arthrosis	0.899**	0.628**	0.211**	0.145**	0.056**	0.045**
	(0.142)	(0.171)	(0.047)	(0.028)	(0.009)	(0.007)
Spondylosis or osteoarthritis	0.476	0.853**	0.270**	0.175**	0.025	0.006
	(0.284)	(0.223)	(0.064)	(0.047)	(0.015)	(0.011)
Dorsalgia	1.142**	0.636**	0.1	0.066	0.040**	0.021*
	(0.208)	(0.181)	(0.052)	(0.038)	(0.011)	(0.008)
Other soft tissue disorders	1.54**	1.179**	-0.102*	-0.048	0.008	0.006
	(0.28)	(0.225)	(0.049)	(0.035)	(0.012)	(0.008)
Other muscle and joint pains	0.839**	0.479**	-0.005	0.026	0.026**	0.012*
	(0.173)	(0.123)	(0.038)	(0.024)	(0.009)	(0.006)
Hyperplasia of prostate	2.017**	0.965**	0.526**	0.195**	0.108**	0.046**
	(0.251)	(0.253)	(0.068)	(0.053)	(0.013)	(0.014)
Dizziness and giddiness	1.058**	0.999**	-0.315**	-0.118**	-0.041**	-0.014
	(0.207)	(0.15)	(0.049)	(0.027)	(0.013)	(0.008)
Injuries (wounds, fractures, dislocations)	1.836**	1.753**	-0.239	-0.036	-0.061	-0.006
	(0.683)	(0.411)	(0.139)	(0.085)	(0.037)	(0.024)
Injuries from accidents, external factors	-0.086	-0.4	-0.045	-0.041	0.034	0.013
	(0.488)	(0.302)	(0.147)	(0.091)	(0.036)	(0.025)
General examinations and investigations	0.838**	0.513**	-0.049	-0.058	-0.02	-0.025**
	(0.156)	(0.128)	(0.044)	(0.030)	(0.012)	(0.008)
Special examinations and investigations	1.35**	1.149**	0.019	-0.054	-0.079**	-0.080**
	(0.253)	(0.183)	(0.050)	(0.031)	(0.014)	(0.010)
Follow-up examinations & follow-up care	1.885**	1.575**	-0.064	-0.074**	-0.023*	-0.029**
	(0.181)	(0.161)	(0.040)	(0.027)	(0.010)	(0.007)
Therapy and Rehabilitation	3.766**	2.636**	-0.06	-0.155**	-0.085**	-0.087**
	(0.495)	(0.348)	(0.058)	(0.043)	(0.016)	(0.011)