

Waiting Time and Quality of Patient Care: Consequences of a Medical Expense Transaction Reform in China

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Contents

01

Part one
Background

02

Part two
Data

03

Part three
**Method &
Model**

04

Part four
**Results &
Implication**

Background

Long Waiting time



Source:

Emily Rauhala, Why China's Doctors Are Getting Beat Up, *Time*, Mar 06, 2014
刘红, 刘姿, 石应康, 谭明英, & 贺昌政. (2012). 华西医院门诊患者就医等待时间的定量分析与研究. *中国医院*(11), 36-37.

Average time from our research sample

32 mins

Waiting time for
registration

45 mins

Waiting before clinic

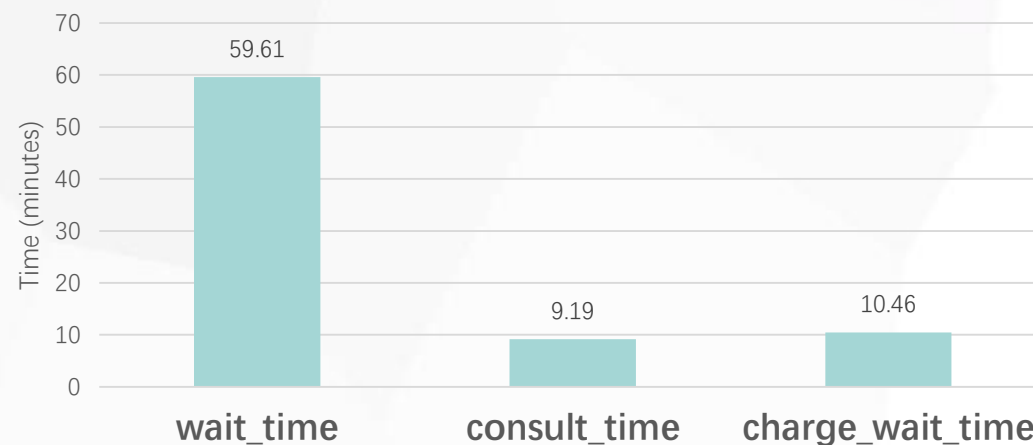
60 ½ day

In half a day a single
doctor must see fifty or
sixty patients”

23%

From 2002 to 2012,
attacks to doctors
jumped an average of
almost 23% per year

Average time per visit



Background

New Information Technology



Self Registration

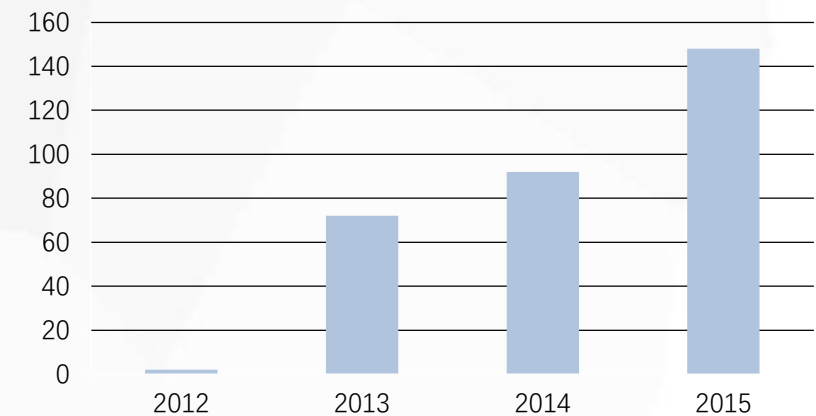
Reduce Average total waiting time 45 mins

Self Payment

pay for medical care efficiently



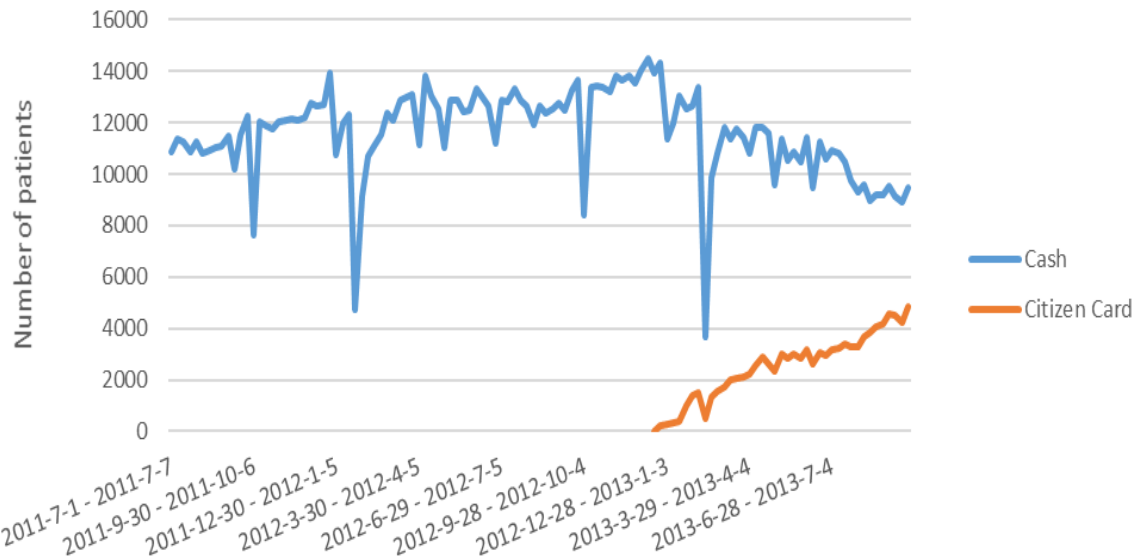
Medical facilities covering numbers



Background

Resident card use : Treatment Group and Control Group

Treatment Group Payment Method

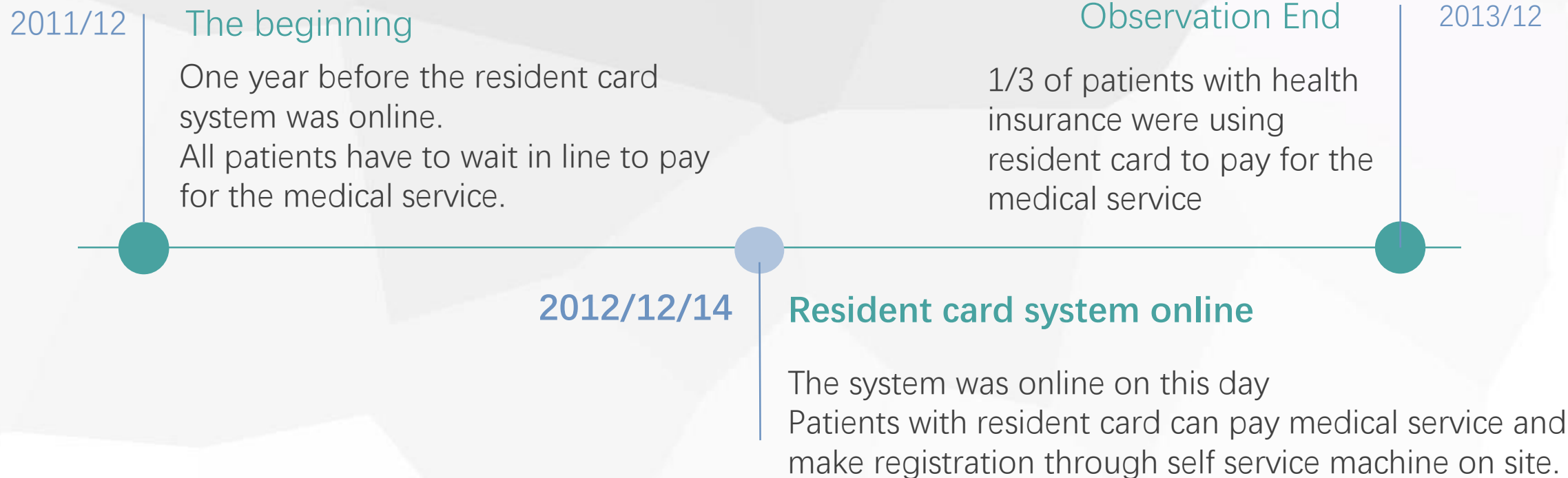


Control Group Payment Method



Data

Claim data of every visit in a major hospital in a province capital city of China between 12/2011 and 12/2013





Method & Model

Difference in Difference Model, individual fixed effect

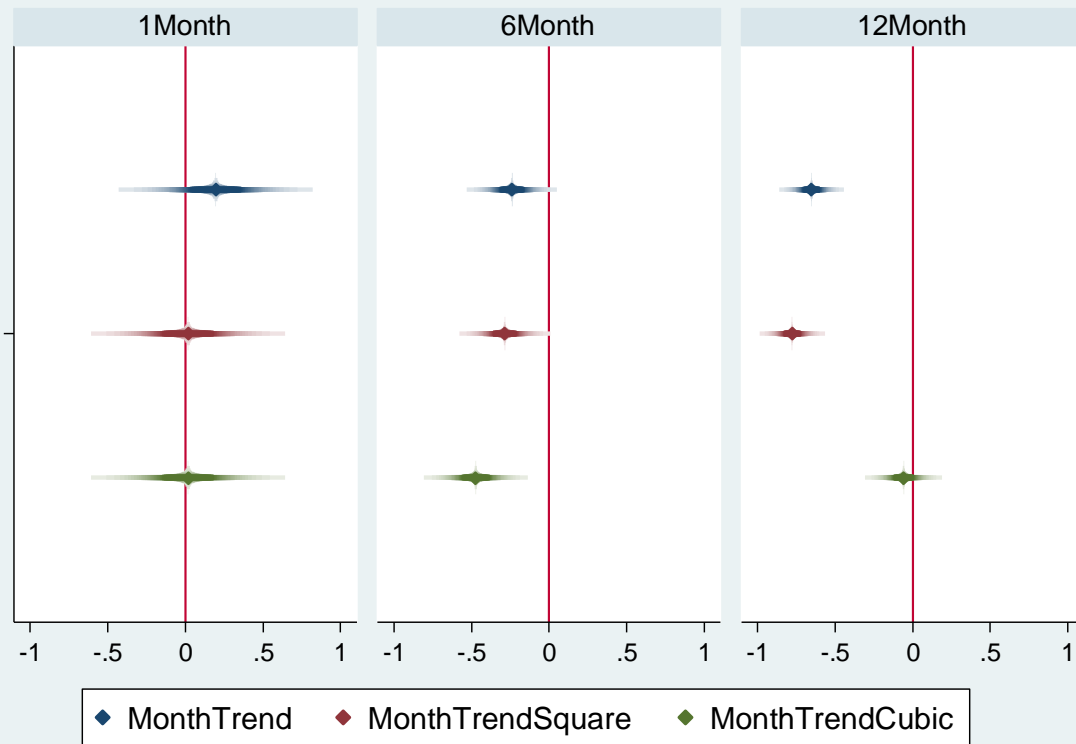
$$Time_{it} = \alpha + \tau Card_post_{it} + c_i + \lambda_t + \lambda_t^2 + \lambda_t^3 + u_{it}$$

- Where $Card_post_{it}$ is the DID indicator
- c_i is individual fixed effect
- λ_t is month trend
- Dependent Variables are at one hospital visit level
 - Waiting time per visit/per treatment
 - Consult time per visit/per treatment
 - Number of treatment per visit

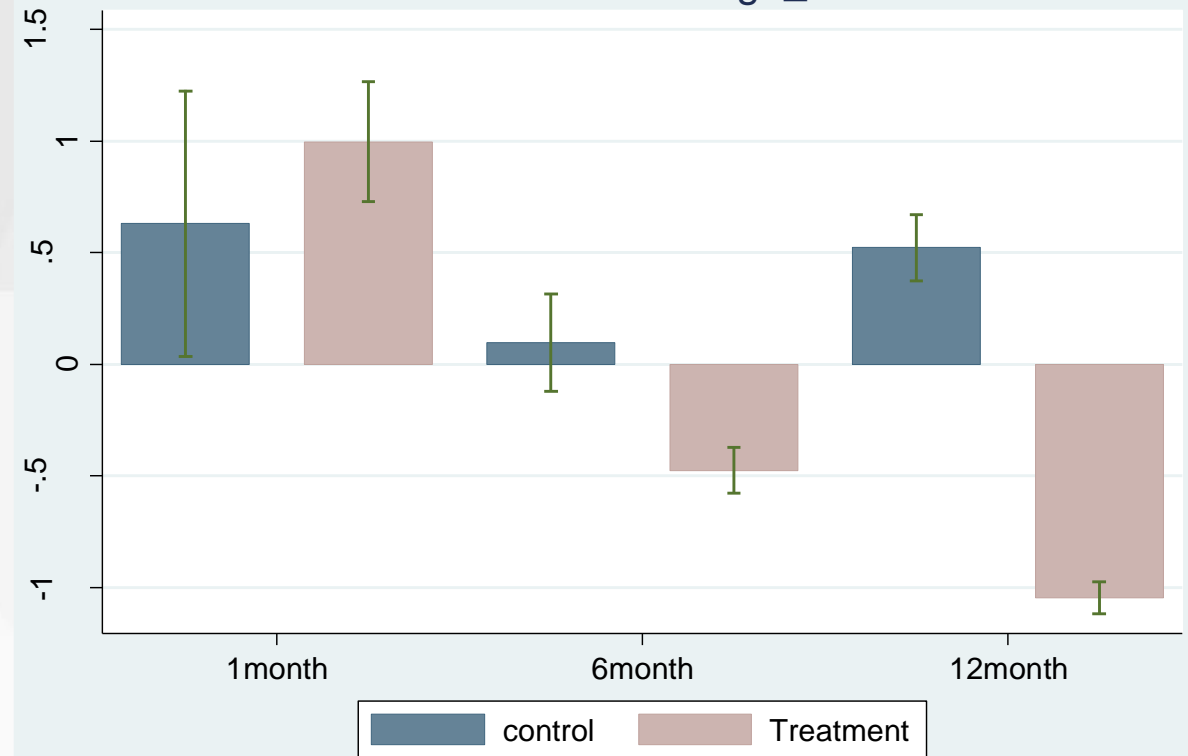
Results :

Charge time decrease for card users but increase for non-users

DID of charge_time, MonthTrend Model



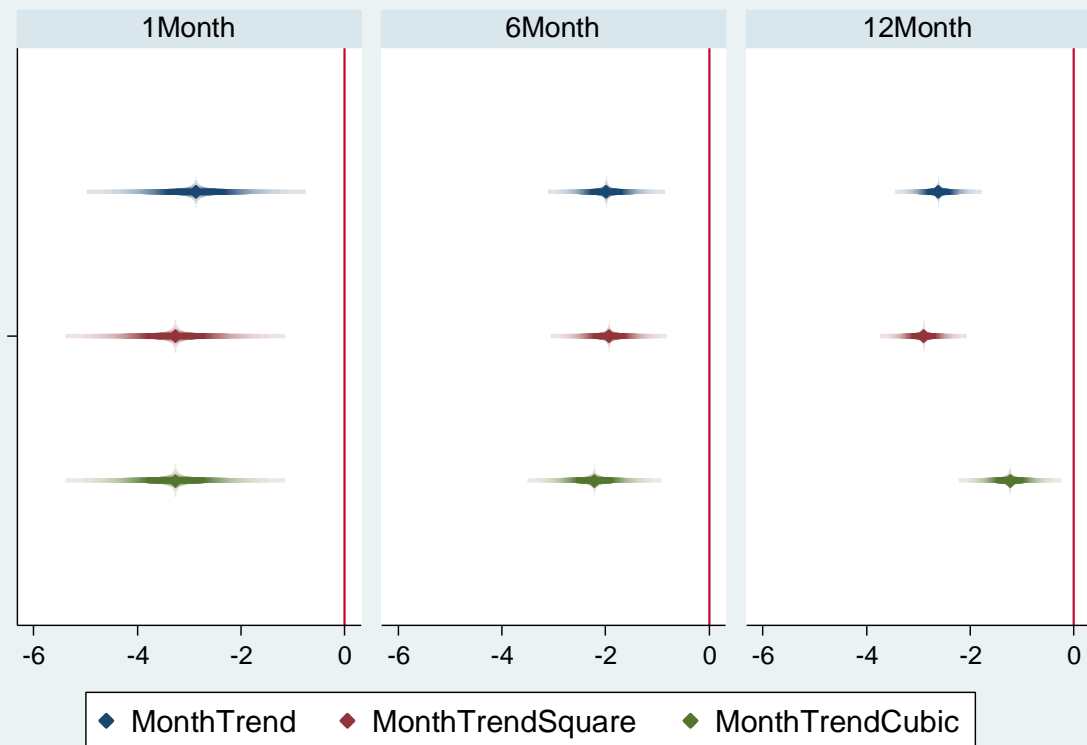
Difference of charge_time



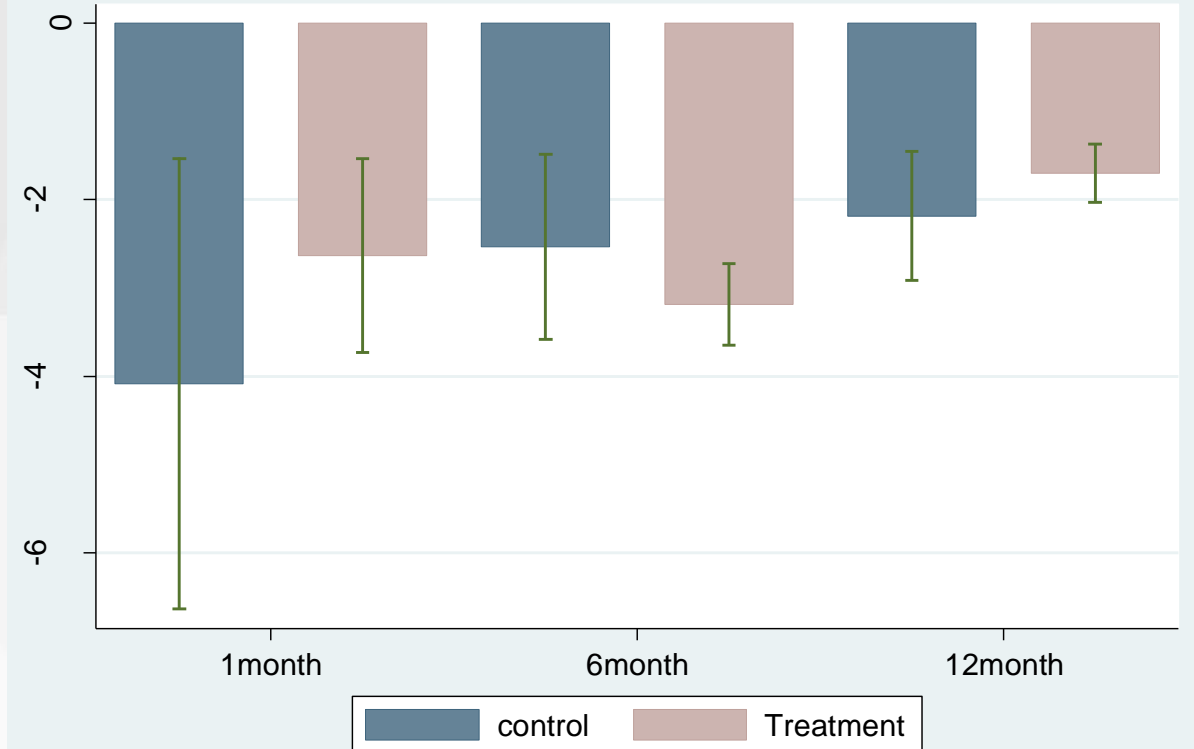
Results:

Waiting time decrease more for card users

DID of Wait_time, MonthTrend Model

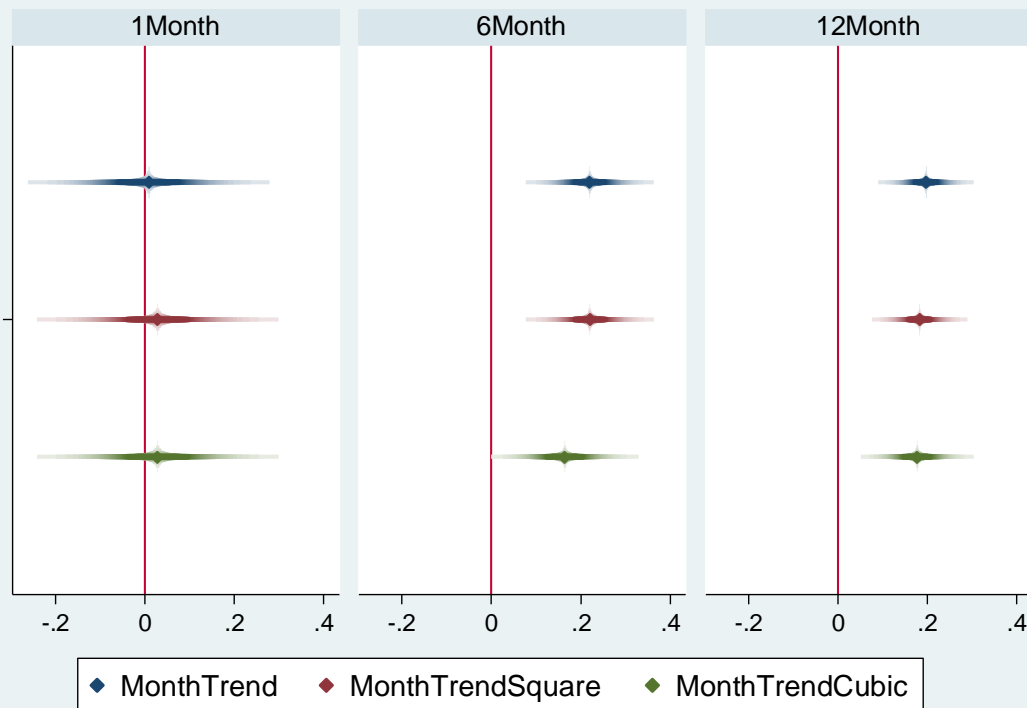


Difference of Wait_time

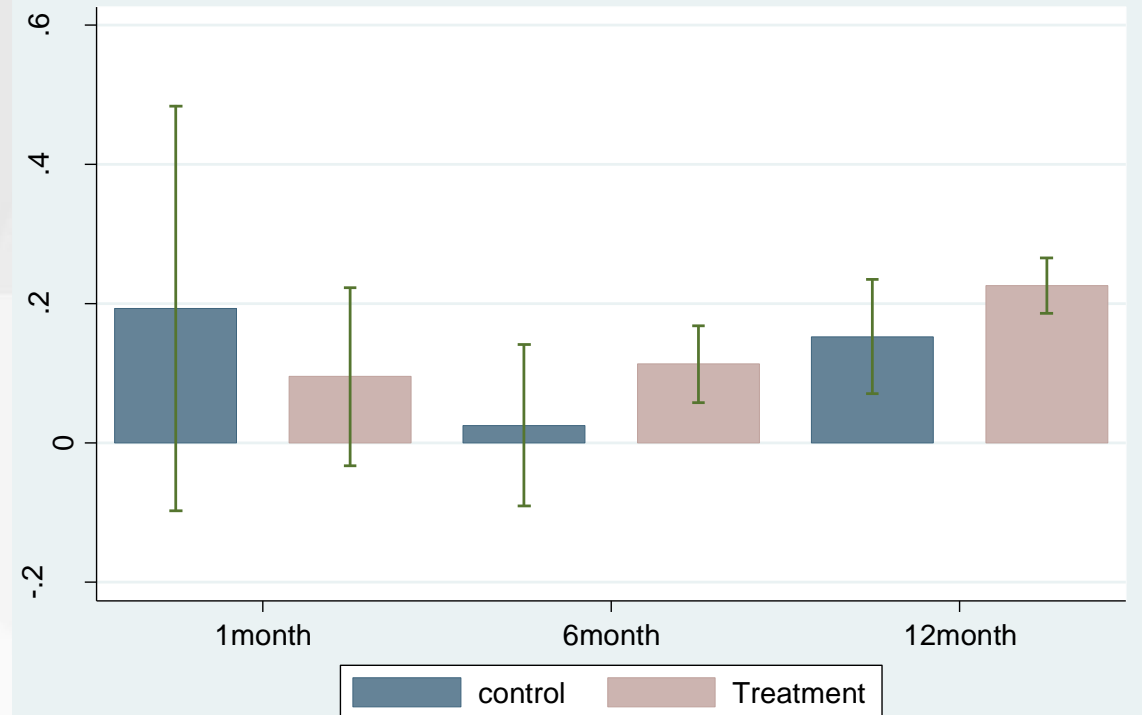


Results: Consult time increase more for card users

DID of treat_time, MonthTrend Model



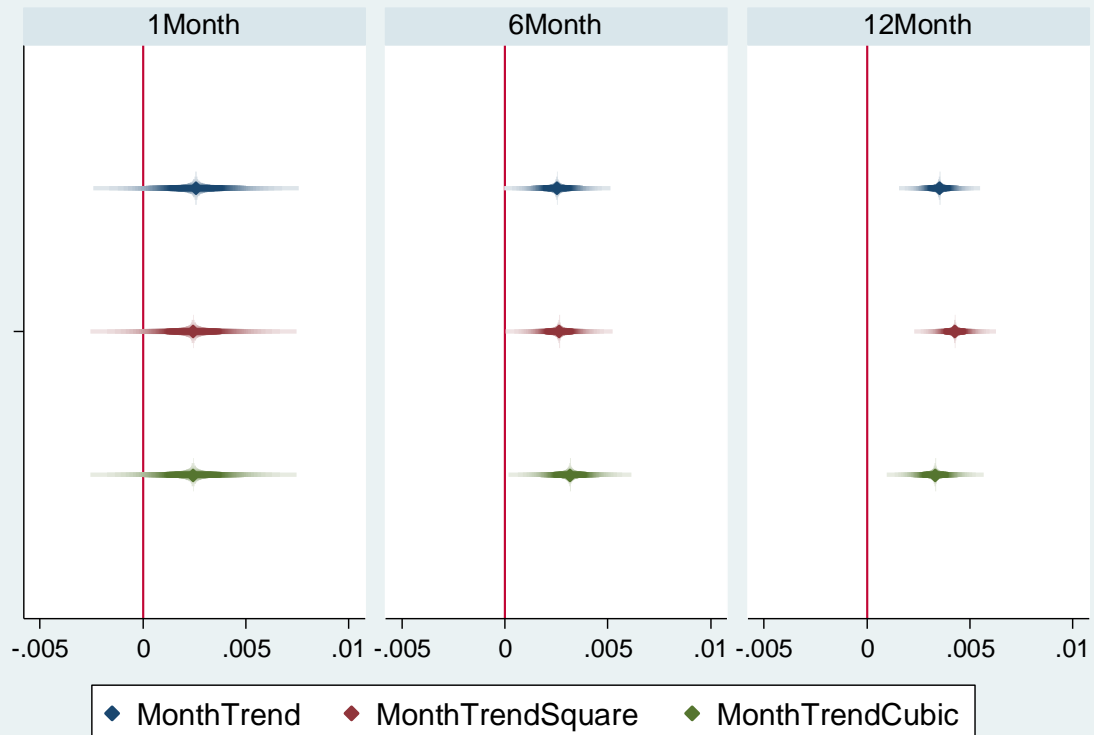
Difference of treat_time



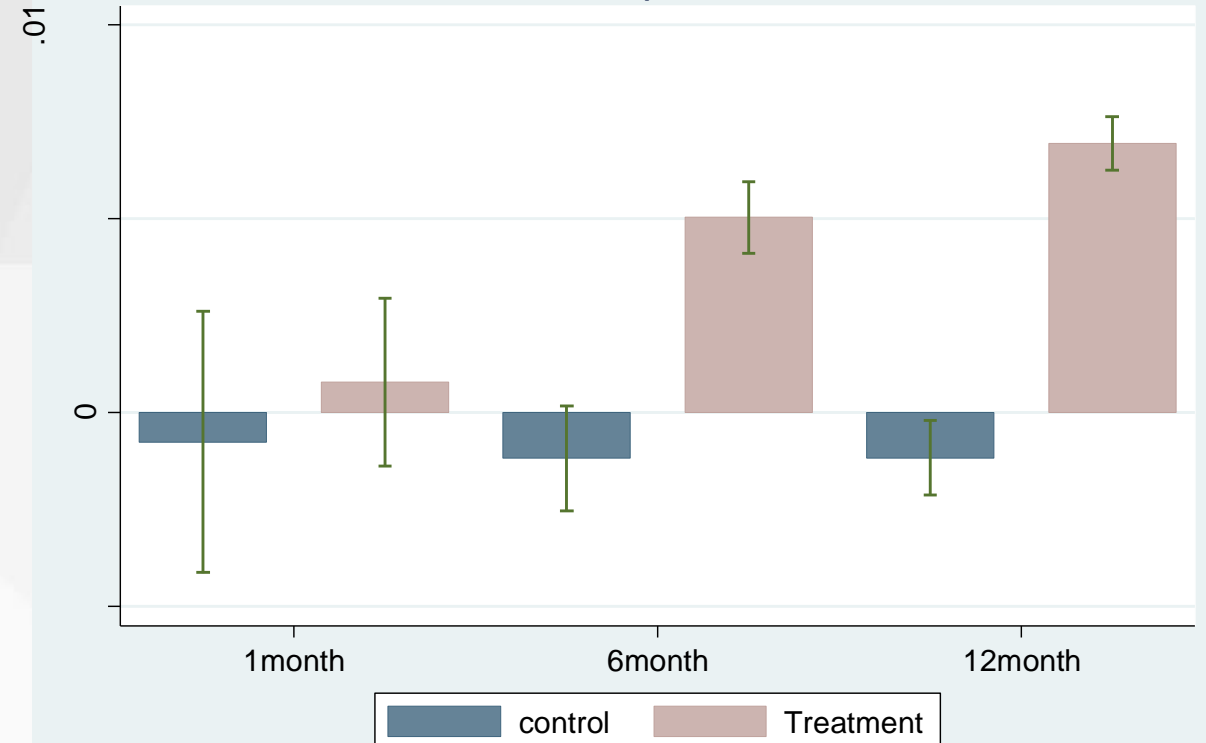
Results:

Card users seek more treatment in one visit

DID of department_number, MonthTrend Model



Difference of department_number





Policy Implication

Technology Advantage

- charge time ↓ 6.67% per visit
- wait time ↓ 5% per visit

Behavior Change

Department per visit ↑ 0.5%

Crowd out

Patients with technology advantage and reduced cost would utilize more health resources while crowding out nonusers.

Public Welfare

Further analysis is required to fully assess the impact of the reform on public welfare.

THANKS!

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