Adverse Effects of Cash Transfers on Older Adult Health in Mexico

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NBER, January 10th 2025

*All opinions are my own and do not reflect the views of the Inter-American Development Bank.

Motivation: Alleviate rural poverty of the older adult population

- Economic consequences of rapid population aging
- In 2021, 10% of the people were aged 65 or above globally and is projected to rise to 16% by 2050 (UN, 2023)
- In OECD countries, around 13% of people aged 66 and above lives in poverty
- The most common policy to address poverty has been to implement cash transfer programs
- This paper study the health effects of an income shock among older poor adults in rural Mexico

Literature Review

- The literature on cash transfers finds positive effects on various outcomes (e.g., mortality, food security, and health, among others) among youth, adults, and older adults
- Some find adverse effects on older adults' health, highlighting the conflicting mediating roles of healthcare utilization versus theoretical ambiguous income effects on diet, and cardiovascular conditions such as hypertension and diabetes
- In Mexico, Progesa shows a beneficial effect on mortality (Barham and Rowberry, 2013), better health care use (Behrman and Parker, 2013), but also adverse effects on chronic diseases (e.g., hypertension and diabetes) (Fernald and Adler, 2008; Fernald, 2013; Aguila et al., 2024)
- Related work on non-contributory pensions in Mexico links the mortality increase to the obesogenic food consumption (Feeney, 2017, 2018), but state-specific programs also shows better health care use (Aguila et al., 2015)

In Today's Talk

→ We will focus on a non-contributory pension program in Mexico: ("70 y más")

- ✓ We study the effects of a locality-targeted cash transfer policy on the older adult population in Mexico
- ✓ Rich administrative data on all deaths with detailed information on the cause of death
- ✓ Longstanding survey data on income and expenditure allow us to study the mechanisms that might be driving the mortality results

What we will do:

- ○ Estimate the effects on Mortality

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- Estimate the effects on Mortality
- Study the potential mechanisms that explain our findings

Preview of Findings: Mortality

- We exploit the timing in locality and age eligibility to implement a triple difference in differences
- We find that the cash transfers led to a 8.7% (CI: $\pm$3.1%) increase in mortality for people aged 70 and above in covered localities (big effects)
- The impact is significant among low-income people (uninsured and those covered by *Seguro Popular*), and insignificant among the insured population
- We found a significant increase in deaths on cardiovascular and circulatory disease-related causes by approximately 5%,
- No significant effects from kidney, cancer, infectious, and respiratory diseases, among others (limited power)

Preview of Findings: Theoretical Mechanisms

- Food intake (Obesogenic Food)
- Healthcare (access and use)
- Lifestyle
- Caregiving (no monetary transfers and time transfers)
- Confounders
- Recession (labor market outcomes)

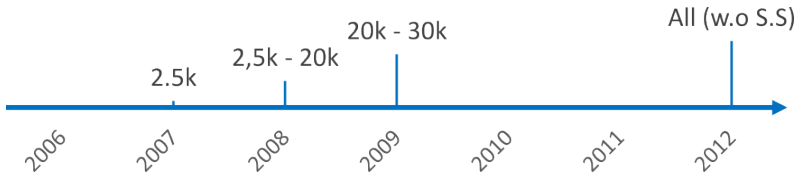
Preview of Findings: Mechanisms

- We use survey data and a regression discontinuity design around 70 to study a variety of income and expenditure outcomes for low-income people in eligible localities
- We find a clear transfer effect of $40 (2024 USD) for eligible ages and localities
- We do not find significant effects on food consumption, nor food groups such as cereals, sugars/fats, meats/dairy, and vice (alcohol and tobacco)
- There are no significant effects on labor market outcomes (e.g., participation and hours worked)
- No significant effect on health spending such as health care services (in and outpatient) and drugs (prescribed and over the counter)

The "70 y Más" Program: Unconditional Cash Transfer for Older Adults

→ Guarantees a fixed amount of $50 (2024 USD) monthly, delivered every two months

- In the sample of low-income eligible households, the median proportion of the cash transfer to total household income is 24% (ENIGH)
- Targeted low-income rural localities gradually based on population locality size



- Some states implemented non-contributory pension programs by 2007, based on age and income (results are robust)
- Seguro Popular health insurance for low-income people was rolled out between 2002 and 2012 at the municipality level

Data Sources

- **Mortality dataset (2002-2011):** All individual death records
  - An individual's cause of death (ICD-10), year of birth, sex, health insurance coverage, and place of residence for each death in the country
- **National Council of Poverty dataset (2002-2011):** Poverty index and population at the locality level
- ***Progresa* and *Seguro Popular* datasets (2002-2011):** Beneficiaries at the locality level
- **Survey of Household Income and Expenditures (ENIGH: 2004-2010)**
  - Individual sources of income, hours worked, education and demographics
  - Household consumption (food, health, education, transportation, among others) and house composition (living conditions)
  - Two waves before and after the 70 y Más program started

Deaths: Treatment Assignment and Sample Construction (Cells)

- We use deaths (age $\in$ [55, 90]) and construct cells of **counts** by locality and age each year, and classify each cell based on eligibility
  - e.g., Deaths from locality X of people age 65 in a given year

Descriptive Statistics by Expansion (2002-2011)

	Deaths				
	Mean by Cell		Total		Population
Population Size Eligibility (Year of Expansion)	All	Low Income	All	Low Income	
	(1)	(2)	(3)	(4)	(5)
0 to 2,499 (2007)	0.04	0.03	430,351	303,504	614
2,500 to 19,999 (2008)	0.47	0.26	444,105	250,429	6,078
20,000 to 29,999 (2009)	1.97	0.92	97,207	45,171	24,811
30,000 to 100,000 (2012-R)	3.80	1.56	241,835	99,127	52,960
100,000+ (2012-U)	31.70	8.15	1,393,892	357,955	416,855
Total	0.22	0.89	2,607,390	1,056,186	2,997

- We focus on the 2007 group of covered localities (treatment) and compare them with those covered in 2012 (control) for consistency with the Survey analyses

The Empirical Model: Poisson Regression

- We fit Poisson models for counts using a log link
- We use the timing of coverage among different localities and age eligibility to study changes in age-locality level outcomes before and after coverage
- Because of confidentiality, we cannot construct death rates since we do not observe the population exposed in every locality for every age and year
- In addition, there are many localities with zero deaths for a given age.
- Literature has mostly relied on aggregated geographic variation

DiD Estimation: Poisson Regression

$$y_{alt} = \exp(\beta \times 70yMas_{alt} + \alpha_a + \gamma_l + \delta_t + \eta_{l_e x a_{70}} + \xi_{l_e x t} + \theta_{t x_{70}} + \Pi_{lxt})\epsilon_{alt},$$

- y_{alt} is the count of deaths for those aged a in locality l in year t
- $70ymas_{alt}$ is an indicator for a cell eligible for the program
- a_{70} is an indicator for those above age 70
- l_e is an indicator for those eligible localities
- Π_{lxt}, vector of controls: marginality index, *Progresa* penetration, *Seguro Popular* coverage, and proxies for data quality, lag of death registration and share of deaths certified by an MD
- ϵ_{alt} is the error term clustered at the level of treatment (age and locality)

Parameter of Interest: Rate Ratio (RR)

- Relative difference to compare incidence rates of events at any given point in time
- For a two time period is defined as:

$$\exp(\beta) = RR = \frac{\frac{E[Y_{d2}|70yMas=1]}{E[Y_{d1}|70yMas=1]}}{\frac{E[Y_{d2}|70yMas=0]}{E[Y_{d1}|70yMas=0]}} \left.\begin{array}{l} = 1, \text{ equal rates in the two groups} \\ > 1, \text{ increased risk for the treated group} \\ < 1, \text{ decreased risk for the treated group} \end{array}\right.$$

- We present our results as percent change, $\hat{\theta}_{ATT\%} = exp(\hat{\beta}) - 1$
- $\hat{\theta}_{ATT\%}$ is identified assuming that in the absence of treatment, the *percentage changes* in the mean would have been the same for the covered and non-covered locality and age groups
- We expect a negative result if the reform decreases deaths among covered relative to non-covered age-locality groups ▸ DDD Results

Leads-and-Lags Model

- Periods and coverage expansions allow us to have a 5-year before and 3-year after expansions

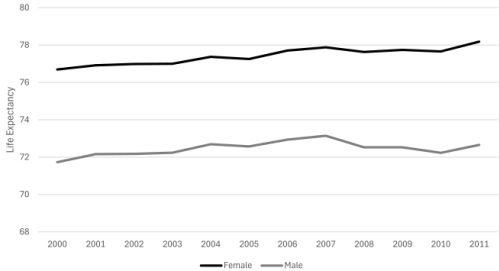
$$y_{alt} = \exp\left(\sum_{k=-5}^{-2} \beta_k D_{alt}^k + \sum_{k=0}^{3} \beta_k D_{alt}^k \alpha_a + \gamma_l + \delta_t + \eta_{l_e x a_{\mathbf{70}}} + \xi_{l_e x t} + \theta_{t x_{\mathbf{70}}} + \Pi_{lxt}\right) \epsilon_{alt},$$

where:

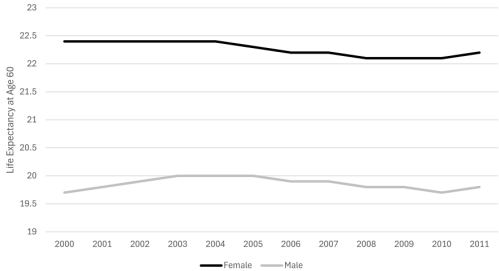
- D_{dt}^k is a dummy variable indicating that locality-age cell d was covered by 70yMas, k periods ago (or will be included k periods ahead for negative values of k)
  - $D_{dt}^k = 1[t = 70yMas_d + k]$, where $70yMas_d$ is the timing of inclusion of locality-age group d
- We normalize the coefficients such that $\beta_{k=-1} = 0$

$\rightarrow \beta_k$ is the effect of 70yMas on y_{alt} for each k period relative to the date before coverage of d

Life Expectancy in Mexico (World Health Organization and United Nations)

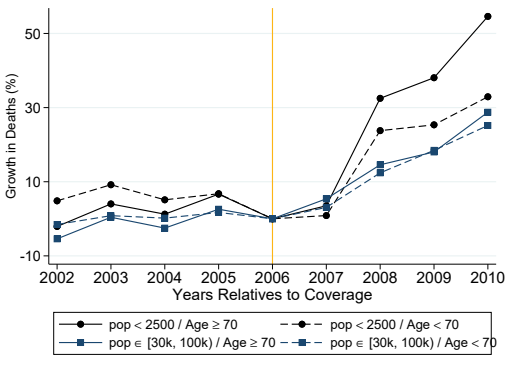


(a) Life Expectancy at Birth

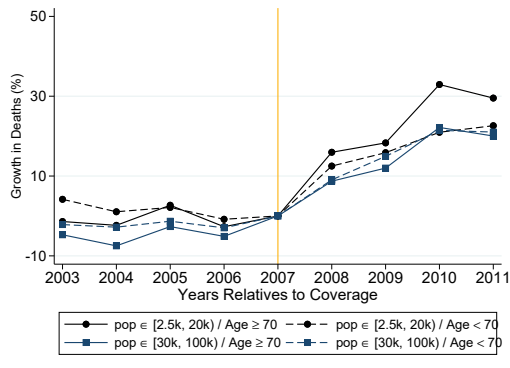


(b) Life Expectancy at Age 60

Growth in Deaths by Expansion

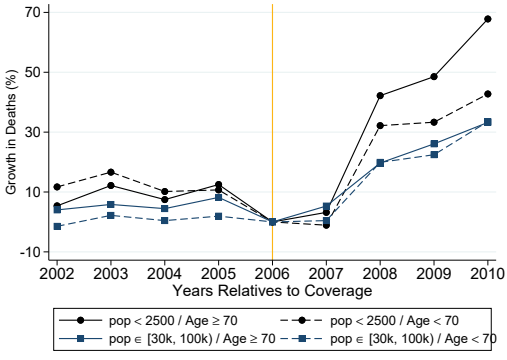


(c) 2007

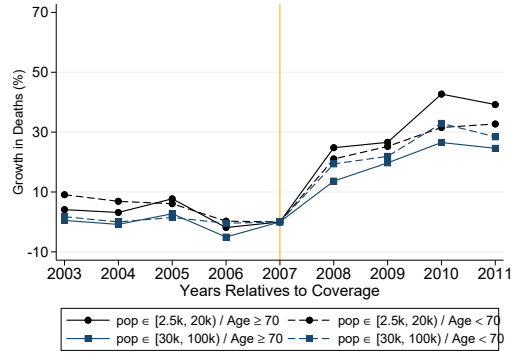


(d) 2008

Growth in Deaths by Expansion and Sample of Health Insurances

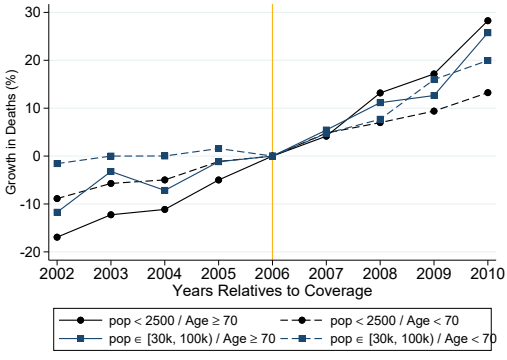


(e) 2007 - Uninsured + *Seguro Popular*

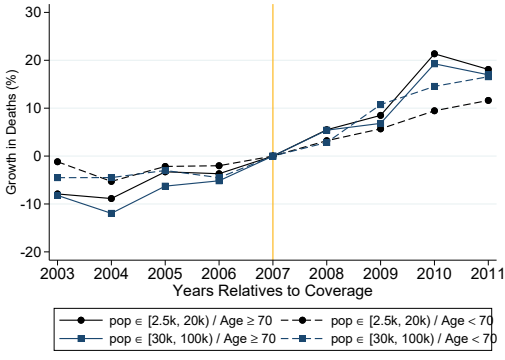


(f) 2008 - Uninsured + *Seguro Popular*

Growth in Deaths by Expansion Sample of Health Insurances (Cont'd)

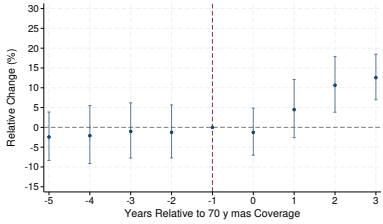


(a) 2007 - Insured

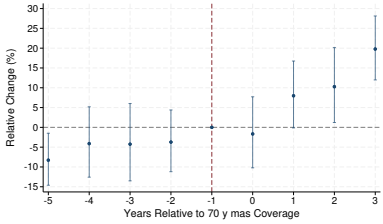


(b) 2008 - Insured

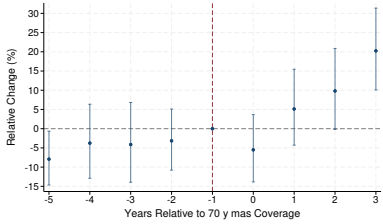
Event Studies: 70 y Mas Impact on Deaths



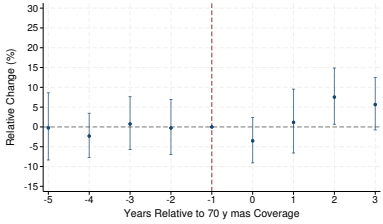
(a) All deaths



(b) Seguro Popular + Uninsured

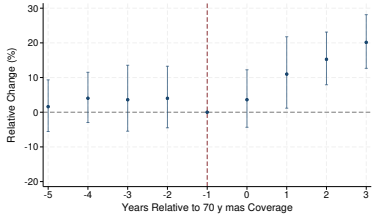


(c) Uninsured

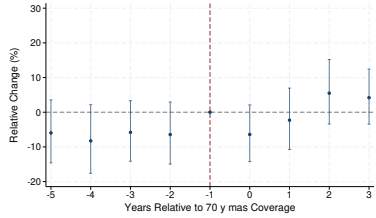


(d) Insured (Private)

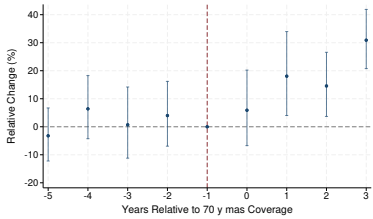
Event Studies: 70 y Mas Impact on Deaths by Sex



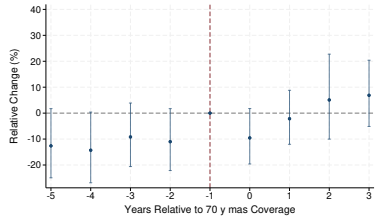
(a) Males - All Deaths



(b) Females - All Deaths

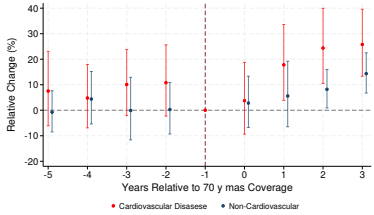


(c) Males - Uninsured + SP

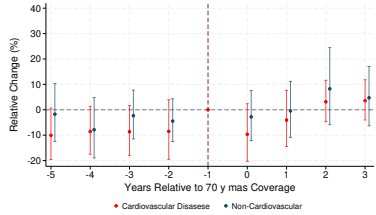


(d) Females - Uninsured + SP

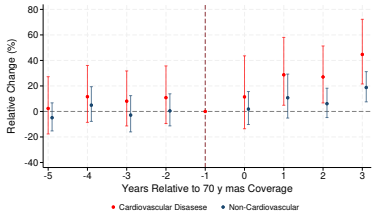
Event Studies: 70 y Mas Impact Deaths by CVD and Sex



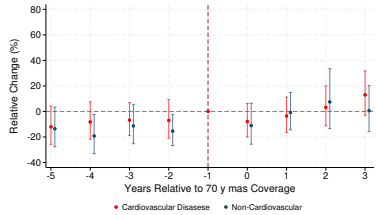
(a) Males - All Deaths



(b) Females - All Deaths

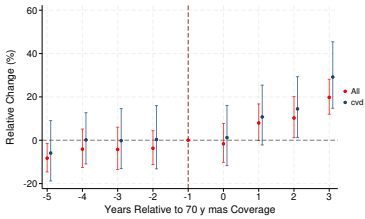


(c) Males - Uninsured + SP

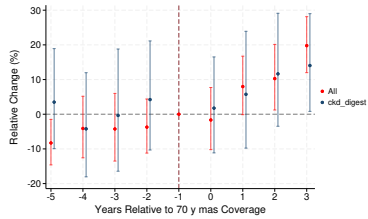


(d) Females - Uninsured + SP

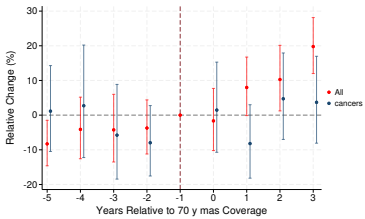
Event Studies: 70 y Mas Impact on Deaths by Diseases



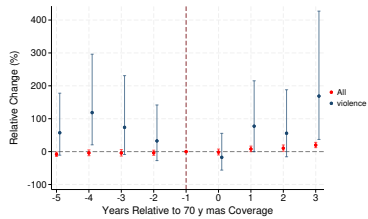
(a) Cardiovascular Disease



(b) CK and Digestive Disease

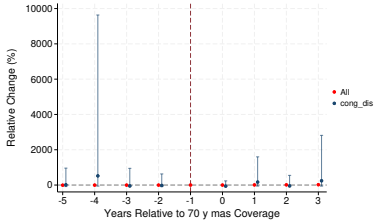


(c) Cancers

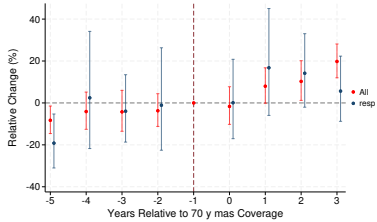


(d) Violence

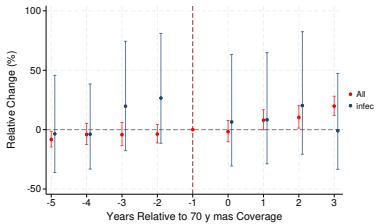
Event Studies: 70 y Mas Impact on Deaths by Diseases (Cont'd)



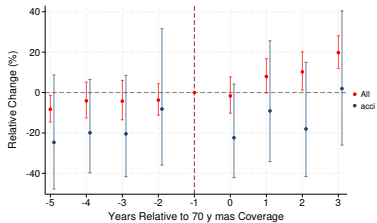
(e) Congenital



(f) Respiratory

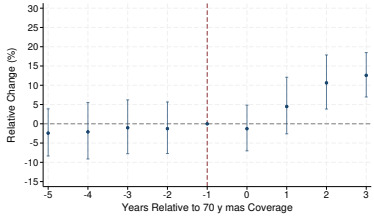


(g) Infectous Disease

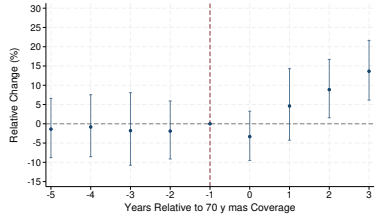


(h) Accidents

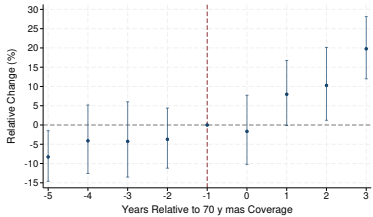
Event Studies: 70 y Mas Impact on Deaths by State



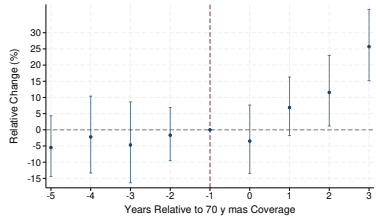
(a) All States and All Deaths



(b) Removing States with Benefits

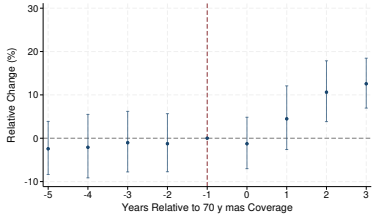


(c) All States Uninsured + SP

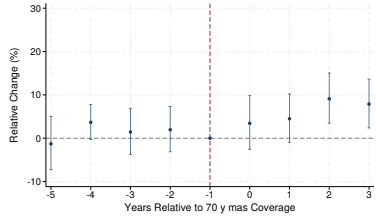


(d) Removing States with Benefits

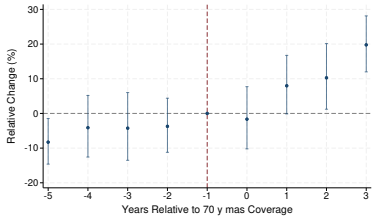
Event Studies: 70 y Mas Impact on Deaths by Expansion and Sample



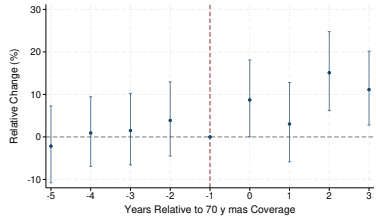
(a) All Deaths - 2007



(b) All Deaths - 2008



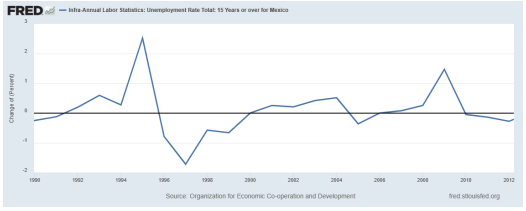
(c) *SP* + Uninsured - 2007



(d) *SP* + Uninsured - 2008

Mechanisms

Unemployment and Gross Domestic Product in Mexico



(a) Unemployment

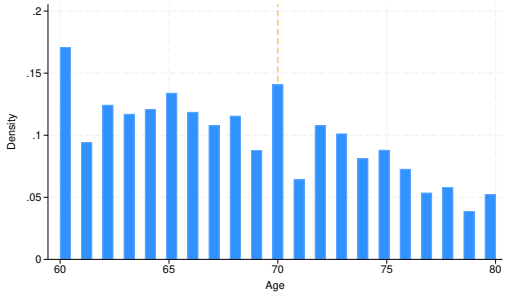


(b) GDP

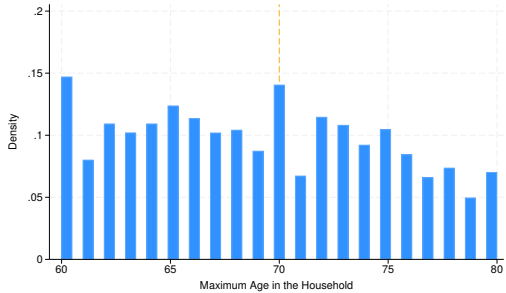
Mechanisms: Treatment Assignment (ENIGH)

- Survey of Household Income and Expenditures (ENIGH)
- Because of confidentiality, we can only use a locality size identifier (4 brackets) that allows us to identify households in localities below 2,500 (eligible for the 2007 expansion)
- We are also able to identify those localities between 30,000 and 100,000 to match our preferred control group
- We identify our policy-relevant sample using education attainment less than elementary instead of health insurance coverage
- We drop age 70 because of age heaping due to misreporting on the survey (only one respondent per household)

Age Heaping

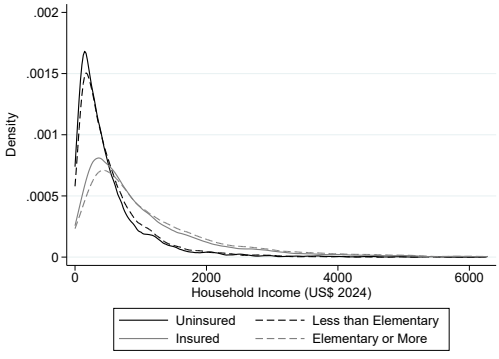


(a) Individuals

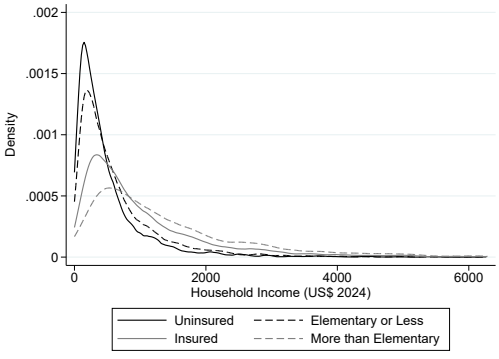


(b) Household

Income by Insurance Coverage and Education Attainment in 2008



(a) Less than Elementary



(b) Elementary or Less

RD Estimation

$$y_{it} = \alpha + \delta \times Age_i + \beta \times \mathbb{1}(Age_i \geq 70) + \gamma \times Age_i \times \mathbb{1}(Age_i \geq 70) + \theta_t + \epsilon_{it},$$

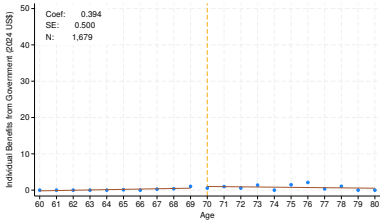
where:

- y_{it} is the outcome of interest for the individual or household i in year t
- Age_i is the age of an individual or the maximum age of a member household
  - Running variable depends on the outcomes
  - Individual Income $\rightarrow$ Individual age
  - Household Expenditure $\rightarrow$ Maximum Household age
- θ_t is the year of the survey fixed effect
- ϵ_{it} is the error term clustered at the household level
- We use survey weights and drop each outcome outlier upper 1%

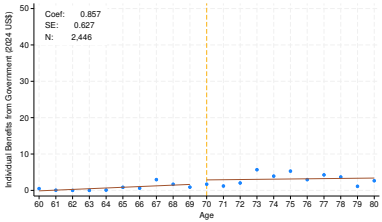
Mechanisms: Survey of Household Income and Expenditures (ENIGH)

- Individual sources of monthly income
  - e.g., wages, capital, rent, business, and government transfers, among others
- Household monthly expenditures
  - e.g., food, healthcare, transportation, among others
- Individual and household characteristics
  - e.g., demographics, education, labor outcomes, and use of time, among others
- We pooled 2005 and 2006 surveys before treatment and 2008 and 2010 after

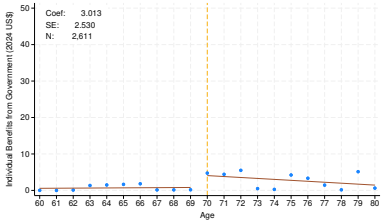
70 y Más Transfer



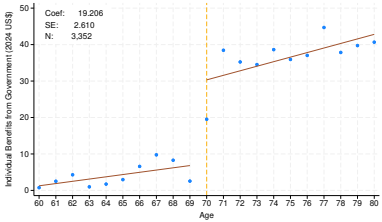
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

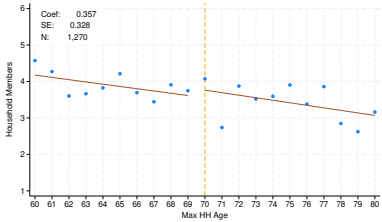


(c) 2005/06 - Eligible

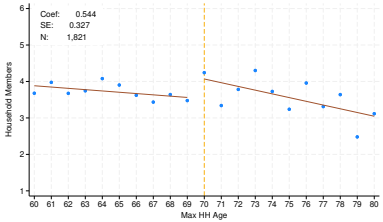


(d) 2008/10 - Eligible

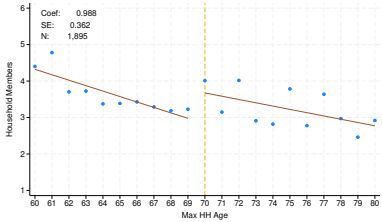
Household Size



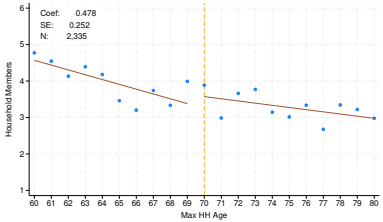
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

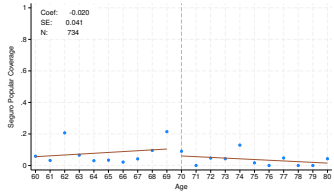


(c) 2005/06 - Eligible

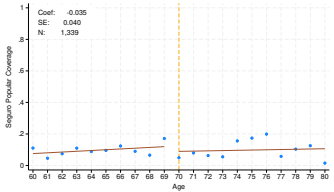


(d) 2008/10 - Eligible

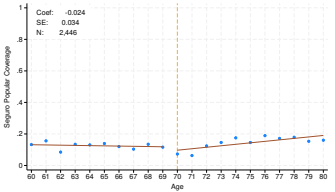
Seguro Popular (Health Insurance Coverage for Low-Income People)



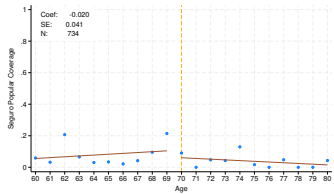
(a) 2006 - Ineligibles



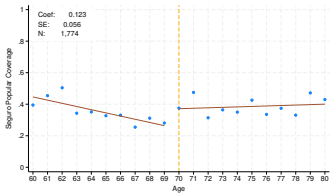
(b) 2008 - Ineligible



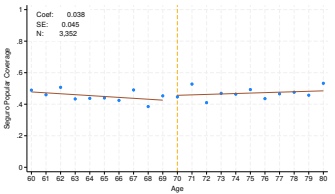
(c) 2008/10 - Ineligible



(d) 2006 - Eligible

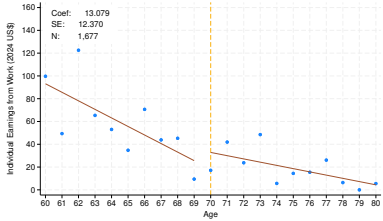


(e) 2008 - Eligible

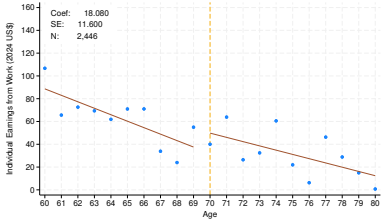


(f) 2008/10 - Eligible

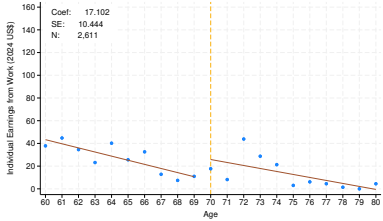
Individual Earnings



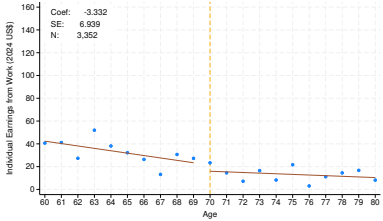
(a) 2005/06 - Ineligibles



(b) 2008 - Ineligibles

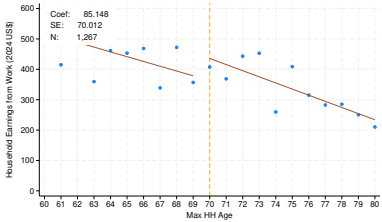


(c) 2005/06 - Eligible

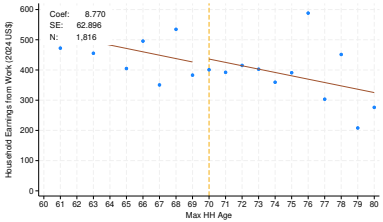


(d) 2008/10 - Eligible

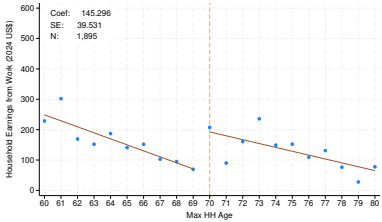
Household Earnings



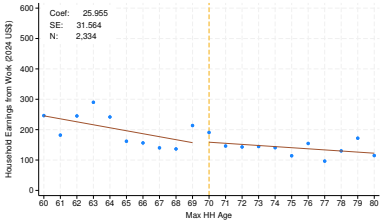
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

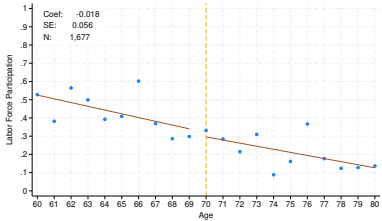


(c) 2005/06 - Eligible

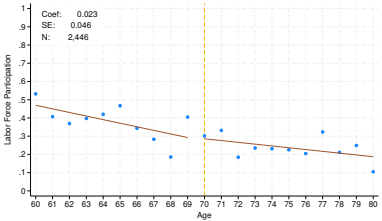


(d) 2008/10 - Eligible

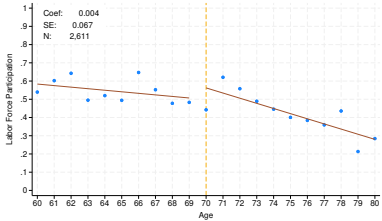
Labor Force Participation



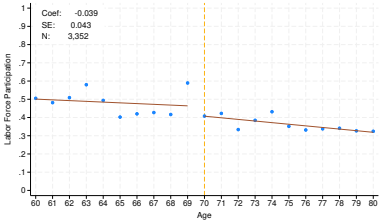
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

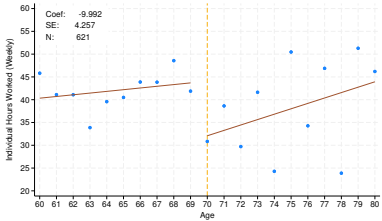


(c) 2005/06 - Eligible

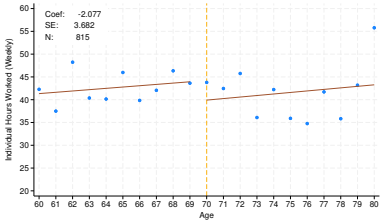


(d) 2008/10 - Eligible

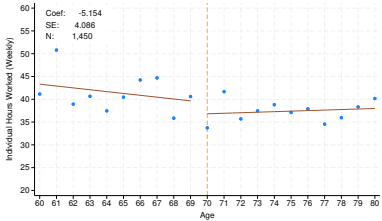
Hours Worked Weekly



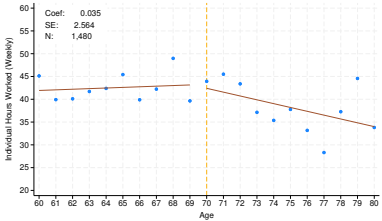
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

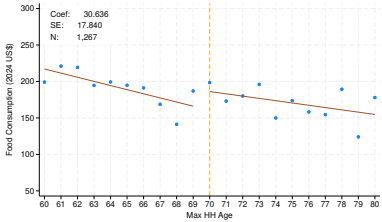


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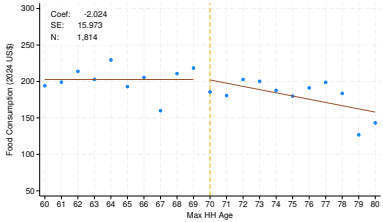


(d) 2008/10 - Eligible

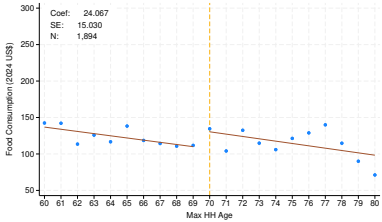
Household Food Consumption



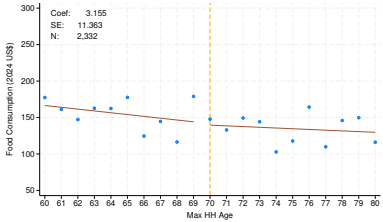
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

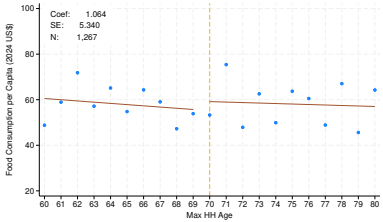


(c) 2005/06 - Eligible

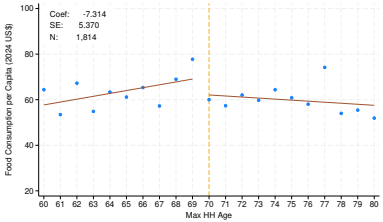


(d) 2008/10 - Eligible

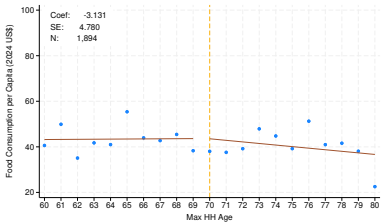
Food Consumption Per Capita



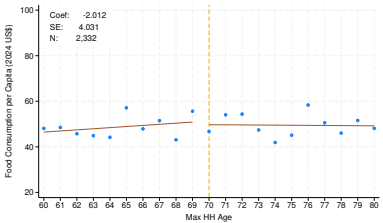
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

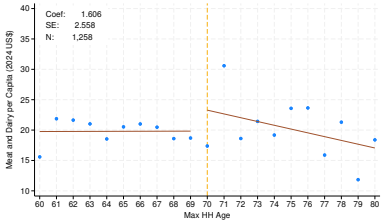


(c) 2005/06 - Eligible

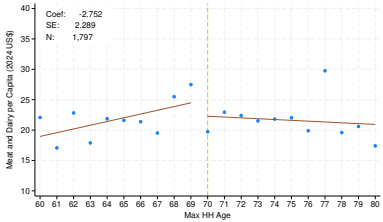


(d) 2008/10 - Eligible

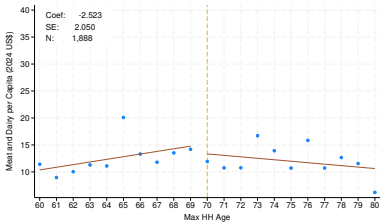
Meat & Dairy Consumption Per Capita



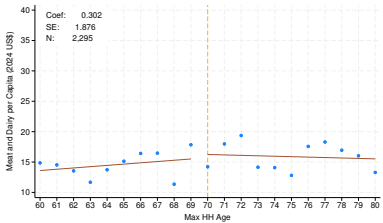
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

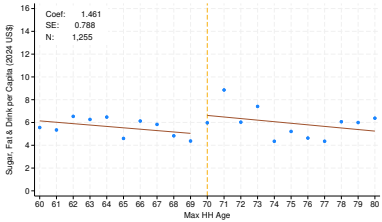


(c) 2005/06 - Eligible

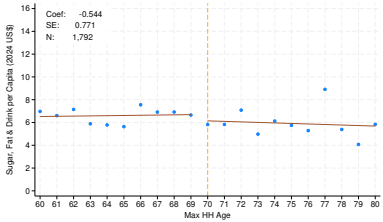


(d) 2008/10 - Eligible

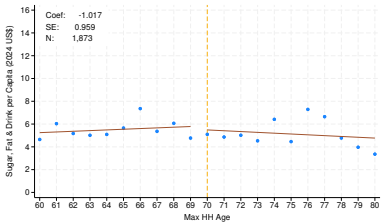
Sugar, Fat, and Soft Drink Consumption Per Capita



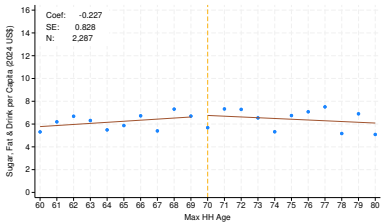
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

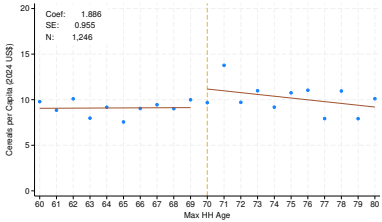


(c) 2005/06 - Eligible

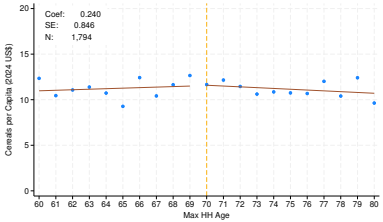


(d) 2008/10 - Eligible

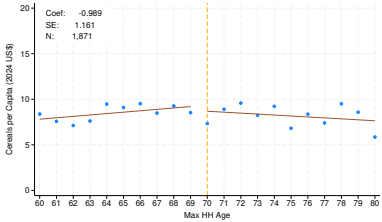
Cereals Consumption Per Capita



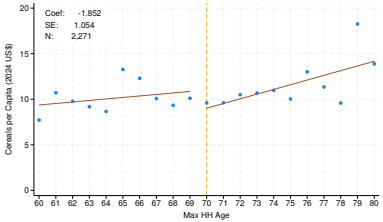
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

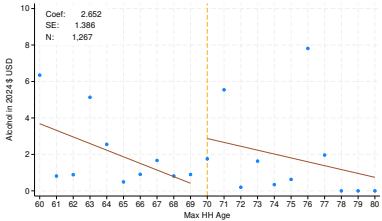


(c) 2005/06 - Eligible

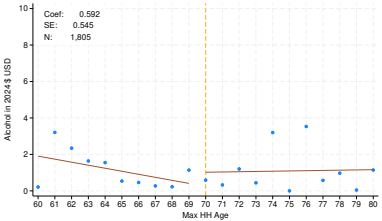


(d) 2008/2010 - Eligible

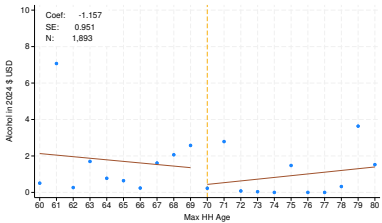
Household Alcohol Consumption



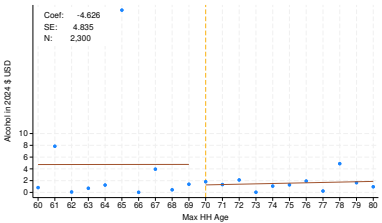
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

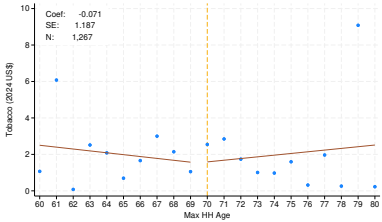


(c) 2005/06 - Eligible

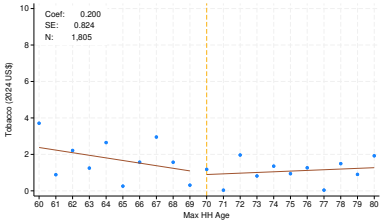


(d) 2008/10 - Eligible

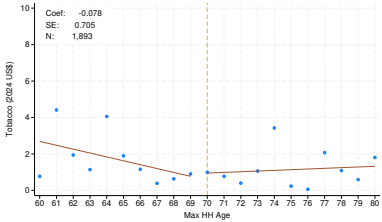
Household Tobacco Consumption



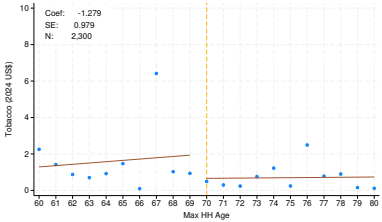
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

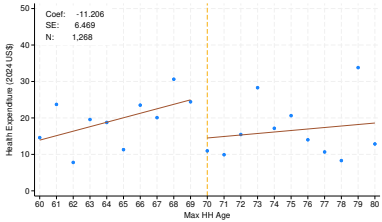


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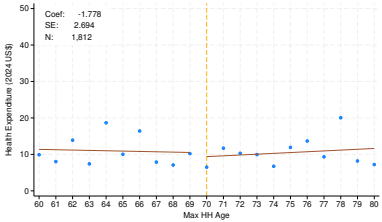


(d) 2008/10 - Eligible

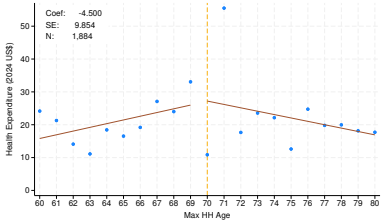
Household Health Expenditure



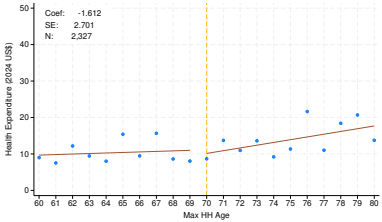
(a) 2005/06 - Ineligible



(b) 2008/10 - Ineligible

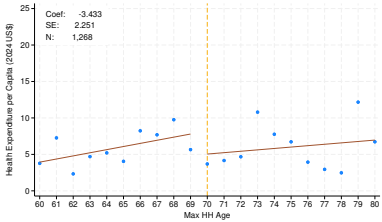


(c) 2005/06 - Eligible

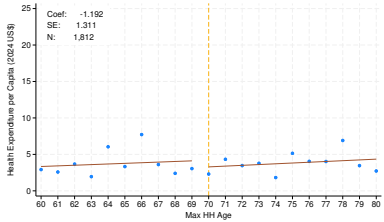


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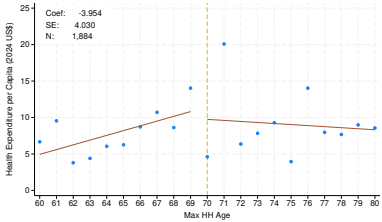
Health Expenditure Per Capita



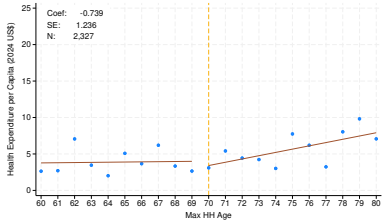
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

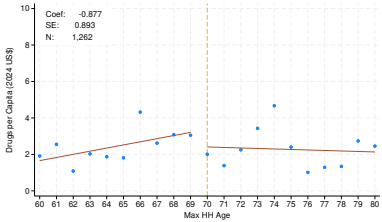


(c) 2005/06 - Eligible

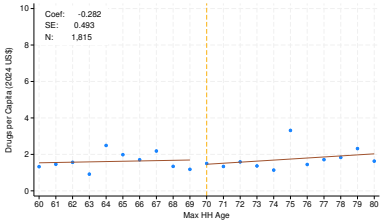


(d) 2008/10 - Eligible

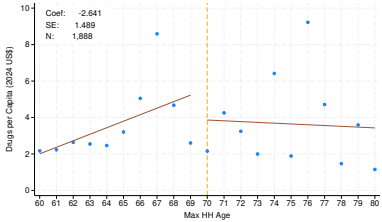
Drugs (Prescribed and Over the Counter) per Capita



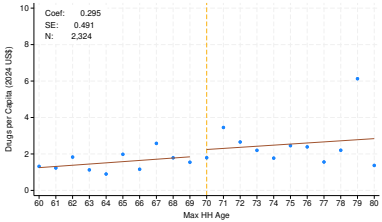
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles

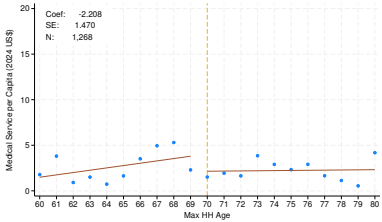


(c) 2005/06 - Eligible

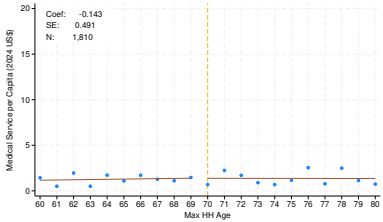


(d) 2008/10 - Eligible

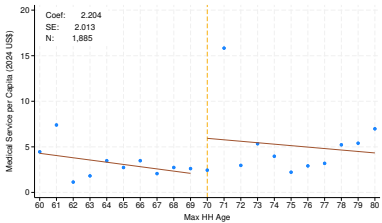
Medical Services (Inpatient and Outpatient) Per Capita



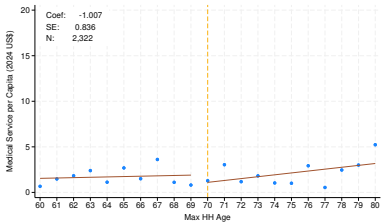
(a) 2005/06 - Ineligibles



(b) 2008/10 - Ineligibles



(c) 2005/06 - Eligible



(d) 2008/10 - Eligible

Concluding Remarks: What Do We Learn?

- Program implemented nationwide in the rural area big effect in mortality
- Rich administrative data allows us to show a significant effect in increasing deaths
- No single conclusive mechanisms related to food consumption linked to obesogenic foods nor labor market behavior, but it could be combination of effects coming from multiple mechanisms
- Next Steps
  - Implement Stack DDD to include 2008 expansion
  - National Health and Nutrition Survey (Lifestyle and health behavior individually)
  - Non-monetary transfers such as caregiving
  - Bartik-style control for the great recession

Gracias!

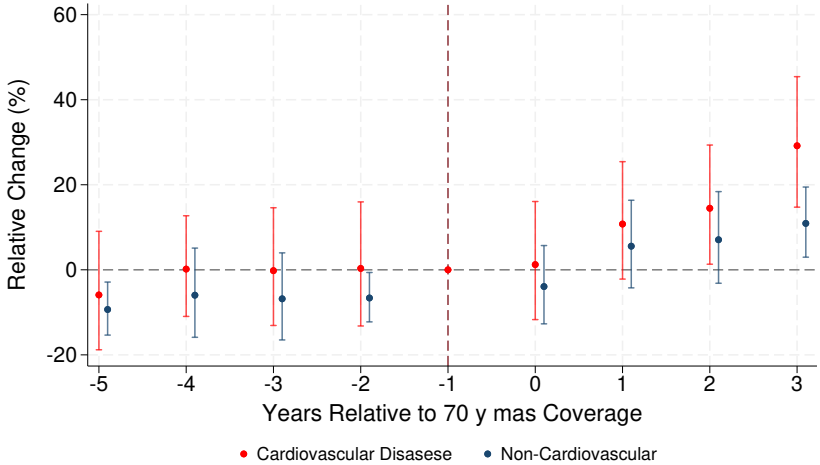
Felipe Menares
felipeme@iadb.org
www.felipemenares.com

Thank you!

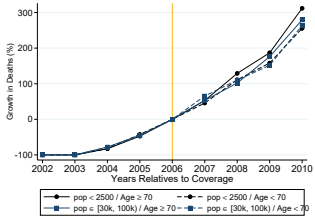
Felipe Menares
felipeme@iadb.org
www.felipemenares.com

Appendix

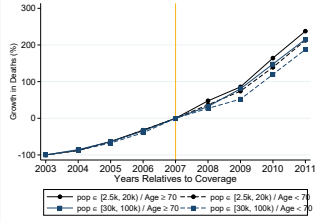
Event Studies: 70 y Mas Impact on CVD and Non-CVD Deaths



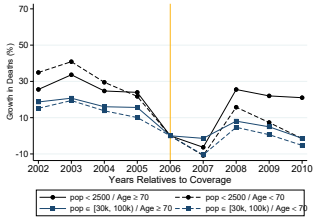
Growth in Deaths by Insurances Coverage



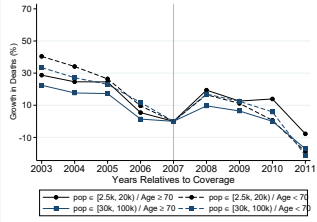
(a) 2007 - *Seguro Popular*



(b) 2008 - *Seguro Popular*

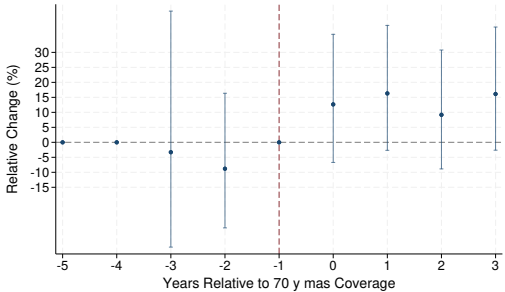


(c) 2007 - Uninsured

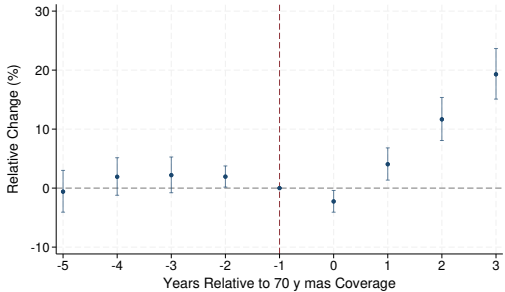


(d) 2008 - Uninsured

Event Studies: 70 y Mas Impact on Deaths: Additional Results and Weights



(a) Seguro Popular



(b) All Deaths Unweighted

"70 y Más" Impact on Deaths

	Main		By Sample and Diseases Interaction		
	All Deaths		All Deaths	Uninsured *Seguro Popular*	Insured (Private)
	(1)	(2)	(3)	(4)	(5)
After 70 y Más	0.0865	0.1481	0.0713	0.1221	0.0138
	(0.0158)	(0.0223)	(0.0226)	(0.0290)	(0.0303)
After 70yMás × Insured		-0.1002			
		(0.0245)			
After 70 y Más × Cardiovascular			0.0218	0.0388	0.0401
			(0.0289)	(0.0350)	(0.0408)
No. Deaths	635,545	635,545	635,545	376,027	259,518
No. Deaths ∈ Cov. Localities (year before coverage)	24,450	24,450	24,450	16,288	8,162
No. Localities	29,145	29,145	29,145	27,787	18,014
Locality Controls	Y	Y	Y	Y	Y
Weights	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
Locality FE	Y	Y	Y	Y	Y
Age FE	Y	Y	Y	Y	Y
Year x Age FE	Y	Y	Y	Y	Y
Year x Locality FE	Y	Y	Y	Y	Y
Age x Locality FE	Y	Y	Y	Y	Y

"70 y Más" Impact on Deaths: Stratified Results

	Main	By Insurance				By Diseases	
	All Deaths	Uninsured	*Seguro Popular*	Insured	Uninsured and *Seguro Popular*	Cardio-Vascular	Non CVD
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
After 70 y Más	0.0468	0.0631	0.0672	0.0345	0.0751	0.0544	0.0390
	(0.0145)	(0.0180)	(0.0376)	(0.0181)	(0.0176)	(0.0178)	(0.0168)
Deaths	1,054,686	487,842	124,185	442,659	612,027	489,867	564,819
Deaths $\in$ Cov. Localities (year before coverage)	51,350	25,456	5,412	20,482	30,868	23,962	27,388
No. Localities	31,778	28,617	19,057	20,610	30,416	27,494	29,398
Locality Controls	Y	Y	Y	Y	Y	Y	Y
Weights	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
Locality FE	Y	Y	Y	Y	Y	Y	Y
Age FE	Y	Y	Y	Y	Y	Y	Y
Year x Age FE	Y	Y	Y	Y	Y	Y	Y
Year x Locality FE	Y	Y	Y	Y	Y	Y	Y
Age x Locality FE	Y	Y	Y	Y	Y	Y	Y

Back

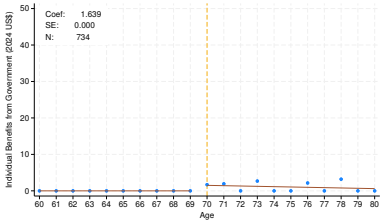
"70 y Más" Impact on Deaths by Insurance

	By Sample		By Insurance Sample	
	All Deaths		Uninsured and Insured (Private)	Uninsured and *Seguro Popular*
	(1)	(2)	(3)	(4)
After 70 y Más	0.0597	0.0759	0.0640	0.0626
	(0.0182)	(0.0176)	(0.0180)	(0.0180)
After 70 y Más × Insured + *Seguro Popular*	-0.0173			
	(0.0165)			
After 70 y Más × Insured		-0.0390	-0.0280	
		(0.0194)	(0.0184)	
After 70 y Más × *Seguro Popular*				0.0013
				(0.0338)
Deaths	1,054,686	1,054,686	930,501	612,027
Deaths ∈ Covered Localities (year before coverage)	51,350	51,350	45,938	30,868
No. Localities.	31,778	31,778	30,746	30,416
Locality Controls	Y	Y	Y	Y
Weights	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Locality FE	Y	Y	Y	Y
Age FE	Y	Y	Y	Y
Year x Age FE	Y	Y	Y	Y
Year x Locality FE	Y	Y	Y	Y
Age x Locality FE	Y	Y	Y	Y

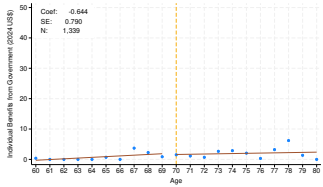
"70 y Más" Impact on Deaths by Cardiovascular Diseases

	Main	by Type of Insurance			
	All Deaths	Uninsured	*Seguro Popular*	Uninsured and *Seguro Popular*	Insured
	(1)	(2)	(3)	(4)	(5)
After 70yMás	0.0380	0.0524	0.0279	0.0664	0.0226
	(0.0168)	(0.0255)	(0.0379)	(0.0210)	(0.0230)
After 70yMás					
× Cardiovascular	0.0170	0.0187	0.0819	0.0131	0.0241
	(0.0183)	(0.0333)	(0.0652)	(0.0239)	(0.0278)
No. Deaths	1,054,686	487,842	124,185	612,027	442,659
No. Deaths ∈ covered localities (year before coverage)	51,350	25,456	5,412	30,868	20,482
No. Localities.	31,778	28,617	19,057	30,416	20,610
Locality Controls	Y	Y	Y	Y	Y
Weights	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
Locality FE	Y	Y	Y	Y	Y
Age FE	Y	Y	Y	Y	Y
Year x Age FE	Y	Y	Y	Y	Y
Year x Locality FE	Y	Y	Y	Y	Y
Age x Locality FE	Y	Y	Y	Y	Y

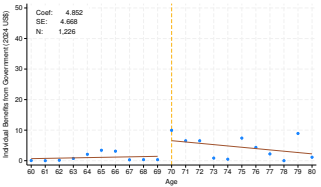
Benefits from Government - Less than Primary - W - Individual Age



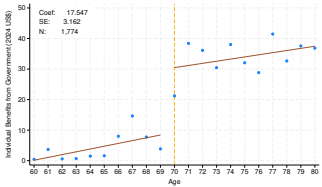
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

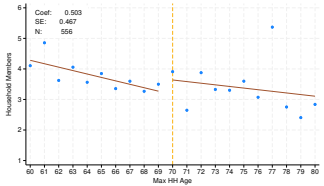


(c) 2006 - Eligible

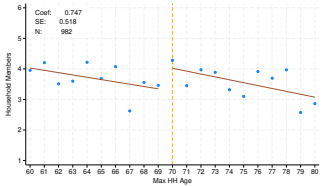


(d) 2008 - Eligible

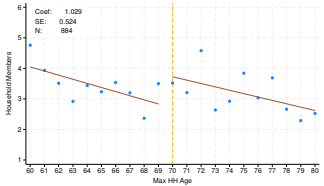
Household Size - Less than Primary - W - Max Age



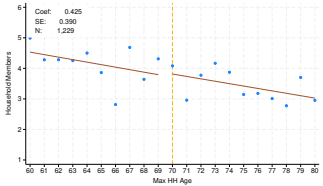
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

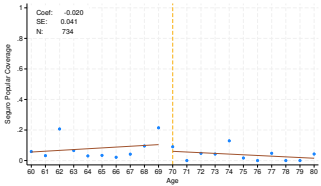


(c) 2006 - Eligible

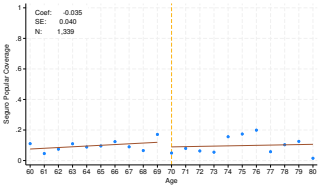


(d) 2008 - Eligible

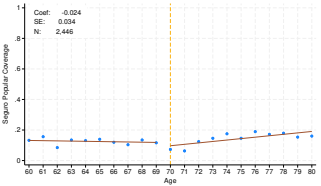
Seguro Popular - Less than Primary - W - Age



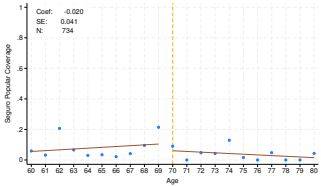
(a) 2006 - Ineligibles



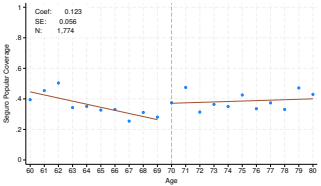
(b) 2008 - Ineligible



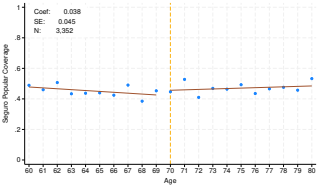
(c) 2008/2010 - Ineligible



(d) 2006 - Eligible

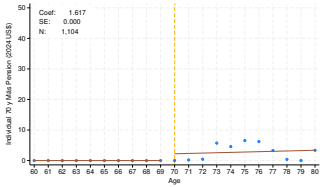


(e) 2008 - Eligible

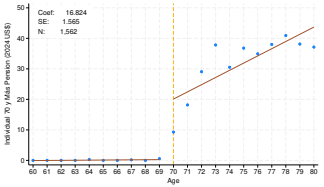


(f) 2008/2010 - Eligible

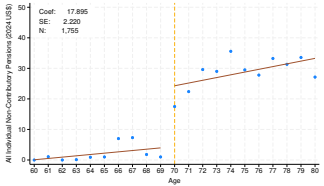
70 y Más - Less than Primary - W - Age



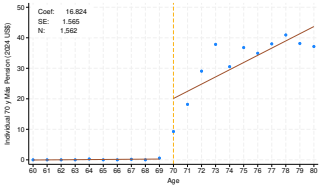
(a) 2010 - Ineligibles



(b) 2010 - Elegibles

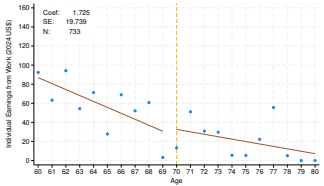


(c) 2008: All NCP

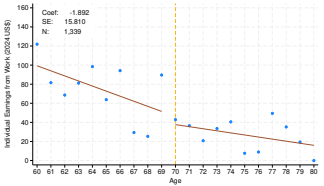


(d) 2008-2010: Pooled

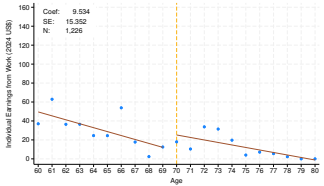
Individual Earnings - Less than Primary - W - Age



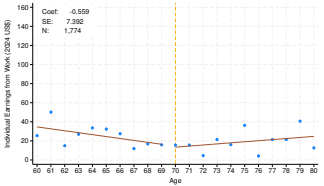
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

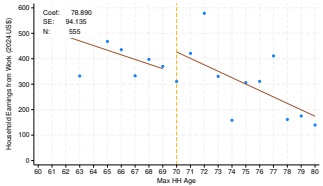


(c) 2006 - Eligible

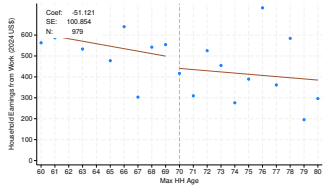


(d) 2008 - Eligible

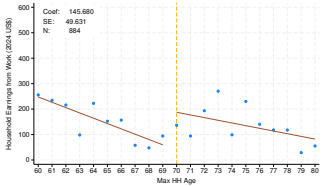
Household Earnings - Less than Primary - W - Max Age



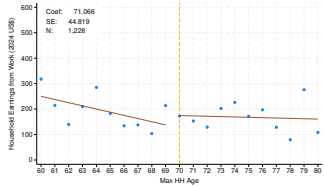
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

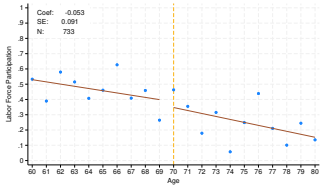


(c) 2006 - Eligible

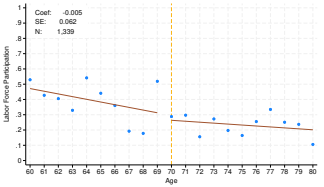


(d) 2008 - Eligible

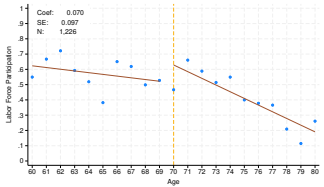
Labor Force Participation - Less than Primary - W - Age



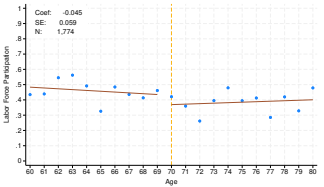
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

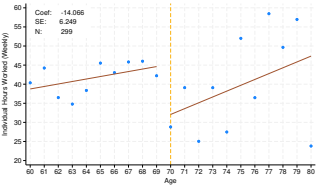


(c) 2006 - Eligible

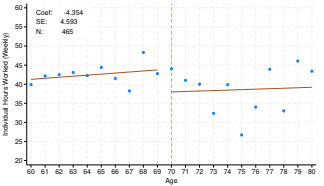


(d) 2008 - Eligible

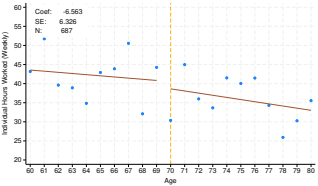
Hours Worked Weekly - Less than Primary - W - Age



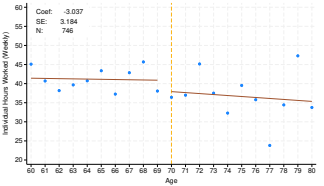
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

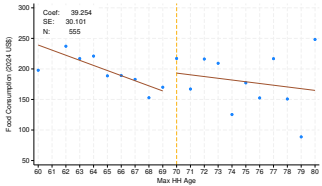


(c) 2006 - Eligible

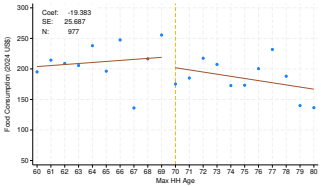


(d) 2008 - Eligible

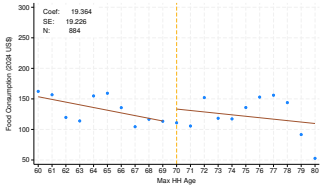
Food Consumption - Less than Primary - W - Max Age



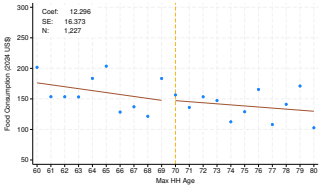
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

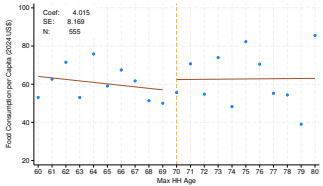


(c) 2006 - Eligible

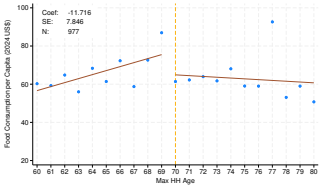


(d) 2008 - Eligible

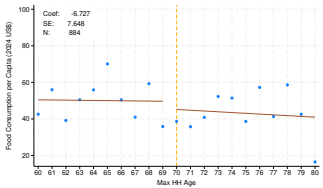
Food Consumption PC - Less than Primary - W - Max Age



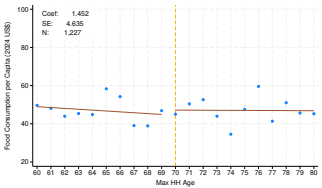
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

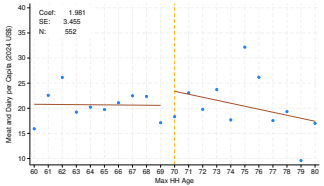


(c) 2006 - Eligible

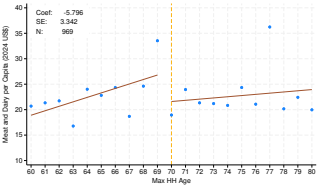


(d) 2008 - Eligible

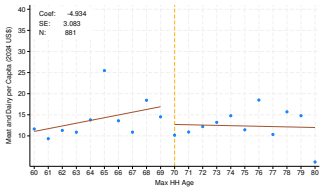
Meat & Dairy PC - Less than Primary - W - Max Age



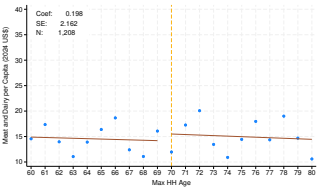
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

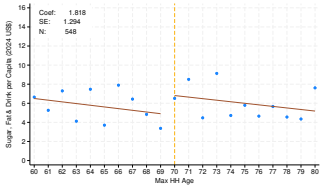


(c) 2006 - Eligible

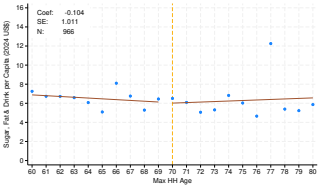


(d) 2008 - Eligible

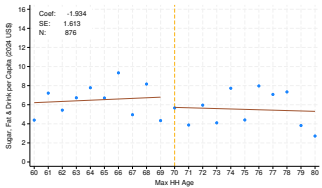
Sugar, Fat, Drink PC - Less than Primary - W - Max Age



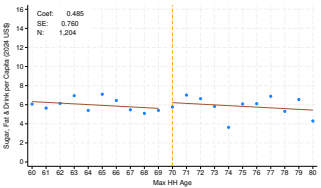
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

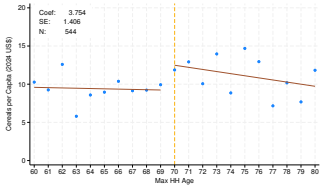


(c) 2006 - Eligible

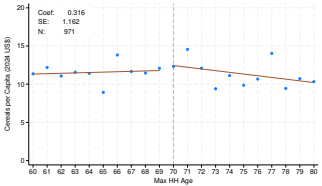


(d) 2008 - Eligible

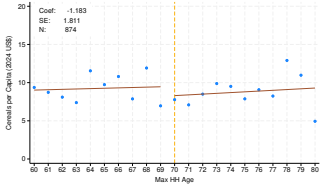
Cereals PC - Less than Primary - W - Max Age



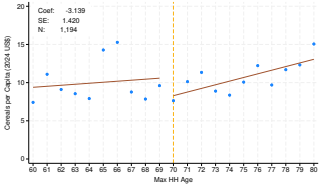
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

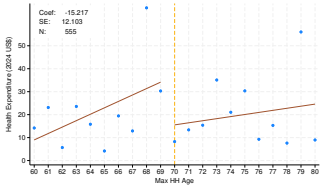


(c) 2006 - Eligible

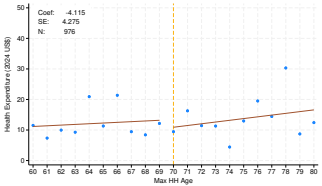


(d) 2008 - Eligible

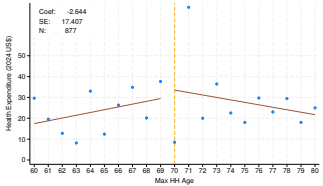
Health Expenditure - Less than Primary - W - Max Age



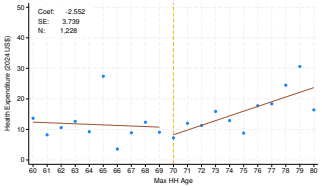
(a) 2006 - Ineligible



(b) 2008 - Ineligible

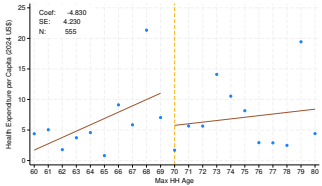


(c) 2006 - Eligible

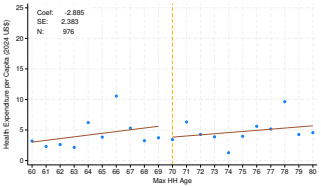


(d) 2008 - Eligible

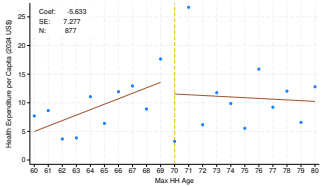
Health Expenditure PC - Less than Primary - W - Max Age



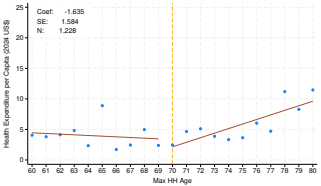
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

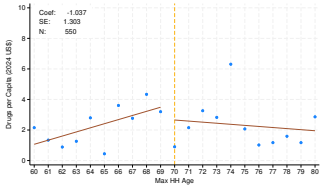


(c) 2006 - Eligible

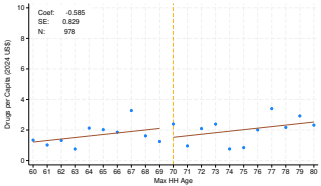


(d) 2008 - Eligible

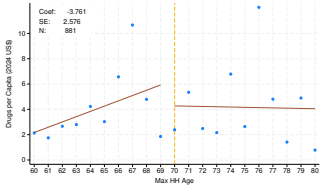
Drug PC - Less than Primary - W - Max Age



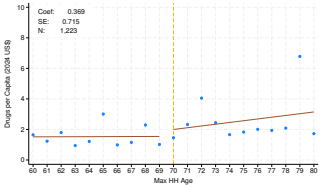
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles

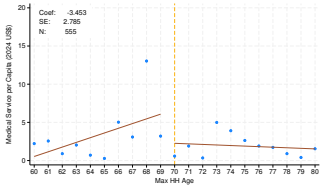


(c) 2006 - Eligible

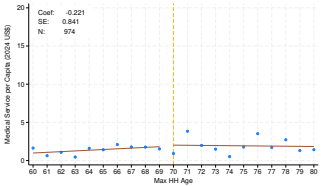


(d) 2008 - Eligible

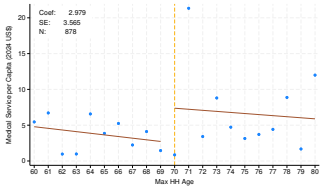
Medical Services PC - Less than Primary - W - Max Age



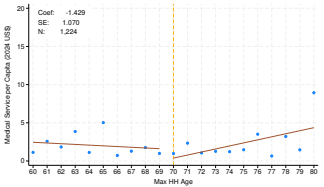
(a) 2006 - Ineligibles



(b) 2008 - Ineligibles



(c) 2006 - Eligible



(d) 2008 - Eligible