

# CENTER FOR ECONOMIC BEHAVIOR & INEQUALITY

Claus Thustrup Kreiner  
Torben Heien Nielsen

NØF marts 2019



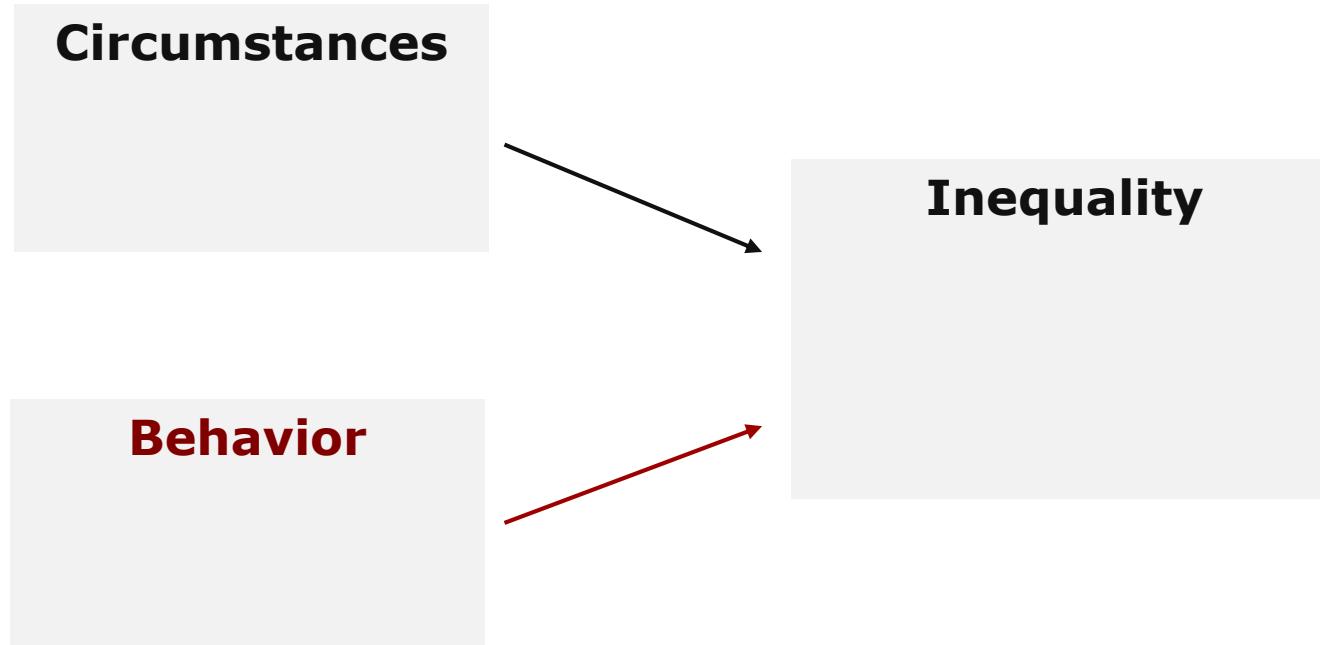
## Oversigt

Kort introduktion til CEBI

Ulighed i levetid

Smittende sundhedsadfærd

# CEBI research agenda



# CEBI research agenda

## Circumstances

Differences in  
bequests from parents

## Inequality

Differences in  
wealth

## Behavior

Differences in patience  
and risk willingness



# CEBI team



Many different fields: Public Economics, Labor Economics, Health Economics, Experimental Economics, Behavioral Economics, Household Finance, Political Economy, Microeconometrics...

# Examples of research projects

- Trends over time in inequality?
- Role of tax evasion for inequality in society?
- Role of children for gender inequality?
- Effects of bequest on wealth inequality?
- Do differences in patience contribute to wealth inequality?
- Relationship btw. preference parameters (patience, risk willingness, altruism) and criminal behaviour?
- Why do some people get into financial trouble?
- Is the correlation across generations in education governed by nature or nurture?
  
- ... and many more

# Health inequality



# Health inequality

Definition: Differences in health status between different population groups

A key measure: Differences in life expectancy (LE) across different income classes

How big? Development over time? Underlying driving forces?

# Recent research

Large inequality in LE and increasing over time

(Case & Deaton *PNAS* 2015; Currie & Schwindt *Science* 2016; Chetty et al. *JAMA* 2016)

Vast public attention:

Where living poor means dying young



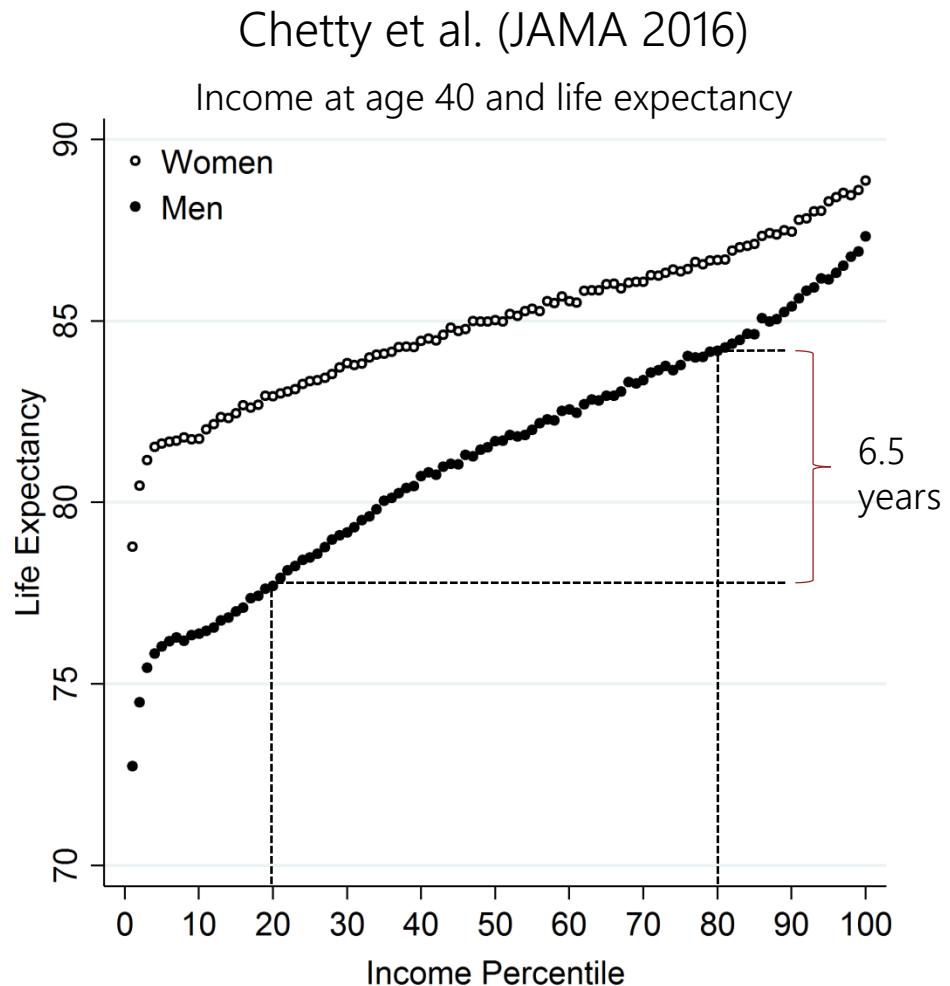
# Recent research

Large inequality in LE and increasing over time

(Case & Deaton *PNAS* 2015; Currie & Schwandt *Science* 2016; Chetty et al. *JAMA* 2016)

Vast public attention:

Where living poor means dying young





# CENTER FOR ECONOMIC BEHAVIOR & INEQUALITY

Claus Thustrup Kreiner  
Torben Heien Nielsen

NØF March 2019

Danmarks  
Grundforskningsfond  
Danish National  
Research Foundation



UNIVERSITY OF COPENHAGEN

PNAS

## Role of income mobility for the measurement of inequality in life expectancy

Claus Thustrup Kreiner<sup>a,1</sup>, Torben Heien Nielsen<sup>a</sup>, and Benjamin Ly Serena<sup>a</sup>

<sup>a</sup>Center for Economic Behavior and Inequality, Department of Economics, University of Copenhagen, 1353 Copenhagen, Denmark

Edited by Angus Deaton, Princeton University, Princeton, NJ, and approved September 28, 2018 (received for review July 6, 2018)

This work proposes a method to compute the income gradient in period life expectancy that accounts for income mobility. Using income and mortality records of the Danish population over the period 1980–2013, we validate the method and provide estimates of the income gradient. The period life expectancy of individuals at a certain age, and belonging to a certain income class, is normally computed by using the mortality of older cohorts in the same income class. This approach does not take into account that a substantial fraction of the population moves away from their original income class, which leads to an upward bias in the estimation of the income gradient in life expectancy. For 40-y-olds in the bottom 5% of the income distribution, the risk of dying before age 60 is overestimated by 25%. For the top 5% income class, the risk of dying is underestimated by 20%. By incorporating a classic approach from the social mobility literature, we provide a method that predicts income mobility and future mortality simultaneously. With this method, the association between income and life expectancy is lower throughout the income distribution. Without accounting for income mobility, the estimated difference in life expectancy between persons in percentiles 20 and 80 in the income distribution is 4.6 y for males and 4.1 y for females, while it is only half as big when accounting for mobility. The estimated rise in life-expectancy inequality over time is also halved when accounting for income mobility.

life expectancy | mortality | inequality | income mobility

**L**ife expectancy is strongly associated with income across societies and within societies (1–8). The relationship between income class and life expectancy within a society is important for evaluating equity and assessing the costs and benefits of public health and social security policies (9–14). It is well established that mortality is decreasing in income across individuals, and this relationship is used to estimate the association between income and life expectancy (6–8, 10, 15). An impressive recent study (7) provides nonparametric estimates of the association between income class and period life expectancy using tax return data for the US population and shows that those in the top of the income distribution at age 40 can expect to live nearly 15 y longer than those in the bottom of the distribution.

The calculation of period life expectancy for a given age group in a given year uses life tables with information about mortality of older cohorts to estimate future mortality. In an unchanging society, in which mortality rates are constant, period life expectancy will equal the observed average life length. Period life expectancy is, therefore, a useful summary measure of cross-sectional mortality rates in a given year and is often used to study trends in mortality (16).

When segregating period life expectancy by income class, the mortality of older cohorts in the same income class is used to estimate future mortality. This approach assumes that individuals stay in the same income classes over time, which is in contrast to evidence in economics and sociology documenting significant income mobility (17). As a consequence, estimates of period life expectancy of the different income classes will in general not be equal to the observed average life length, even when considering an unchanging society in which mortality and mobility rates

are constant. Some of the individuals originally in the top of the income distribution within their cohort will move down in the distribution, while individuals in the bottom of the distribution will tend to move up. Therefore, the method assigns too-high future mortality rates to low-income classes and too-low rates to high-income classes. This creates an upward bias in the estimation of the income gradient in period life expectancy (18).

To see the potential quantitative importance, consider the extreme case of perfect mobility, where income in 1 y is uncorrelated with income in preceding years. In this case, life expectancy of individuals alive 1 y from now is independent of their current income class, even when mortality rates vary strongly with income at each age. Estimates not accounting for income mobility would then point to a large income gradient in period life expectancy for these individuals, although the true gradient is zero.

Table 1 uses our data to illustrate the actual degree of income mobility in society and its importance for predicting future mortality of different income classes. Among 40-y-old males belonging to the bottom 5% of the income distribution, nearly half of those alive at age 50 (45% to be exact) have moved up in the income distribution (labeled movers), while the remaining half have stayed in the bottom part of the distribution (labeled stayers). Similarly, among individuals in the top 5% of the distribution, about half are movers, moving down in the income distribution, while the other half are stayers. This mobility across income classes is important for predictions of future mortality. During the subsequent 10 y, from age 50 to 60, we find that 29% of the stayers in the bottom part of the distribution die, but only 13.5% of the movers die. We observe the reverse pattern in the top of the distribution, where 3.5% of the stayers die, while 5% of the movers die. This example illustrates the potential for

### Significance

People in the bottom of the income distribution live shorter lives than those in the top. This is an important dimension of inequality in society. We demonstrate how forces of income mobility are important for conclusions about inequality in life expectancy. Some people escape poverty, and many people at the top of the distribution only have high incomes temporarily. Those moving out of an income class have very different mortality patterns than those staying. We provide a method that incorporates income mobility in calculations of life-expectancy inequality. The good news is that the degree of inequality in life expectancy is only half as big once accounting for income mobility. The bad news is that inequality continues to rise.

Author contributions: C.T.K., T.H.N., and B.L.S. designed research; C.T.K., T.H.N., and B.L.S. performed research; B.L.S. analyzed data; and C.T.K. and B.L.S. wrote the paper.

The authors declare no conflict of interest.

This article is a PNAS Direct Submission.

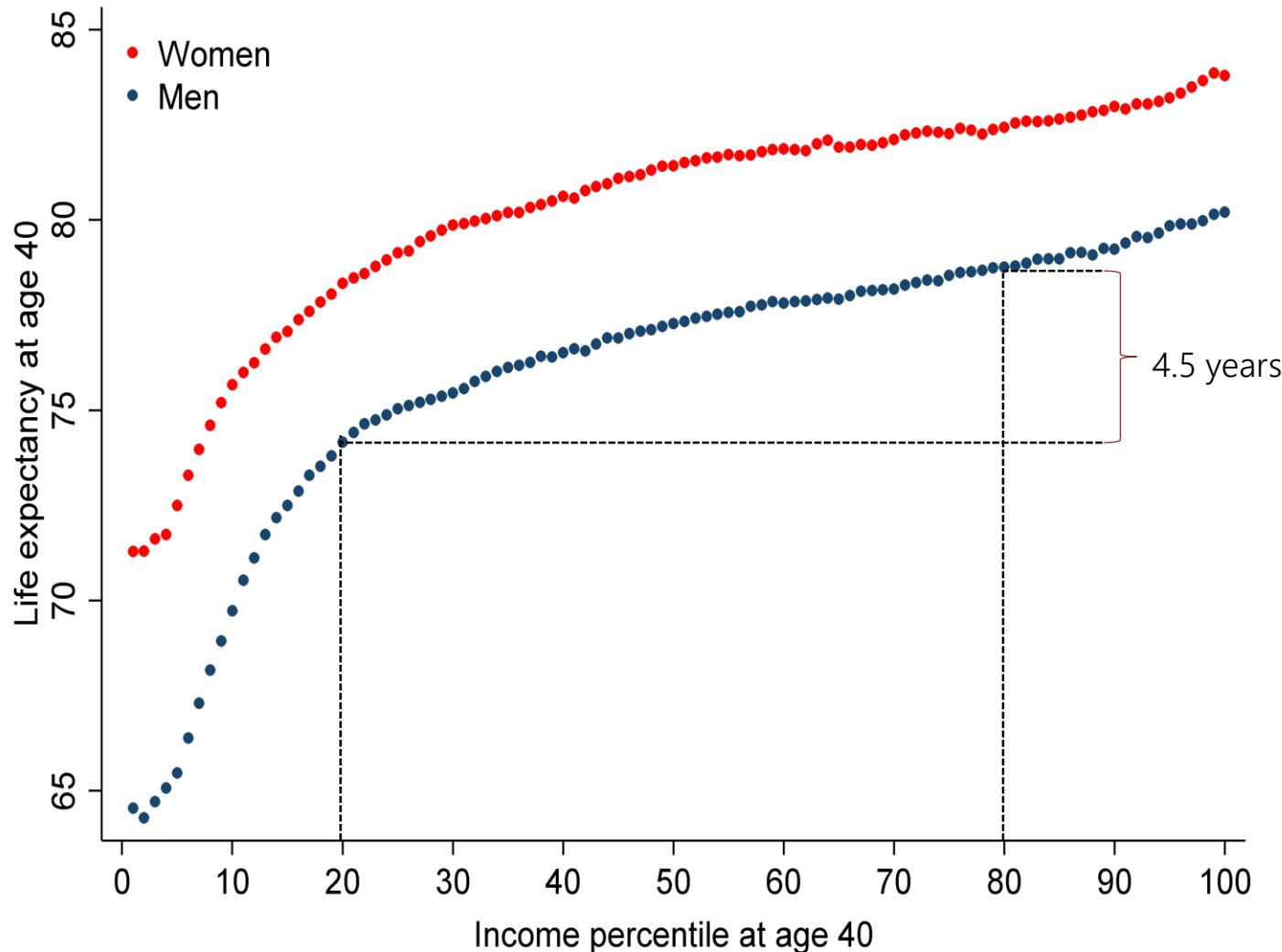
Published under the PNAS license.

<sup>1</sup>To whom correspondence should be addressed. Email: ctk@econ.ku.dk.

This article contains supporting information online at [www.pnas.org/lookup/suppl/doi:10.1073/pnas.1811455115/-DCSupplemental](http://www.pnas.org/lookup/suppl/doi:10.1073/pnas.1811455115/-DCSupplemental).

# Inequality in life expectancy in Denmark

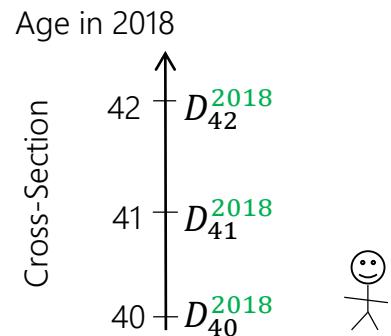
## Average 1983-2013, standard method



# Measurement of life expectancy

## Period life expectancy (LE) at age 40 in 2018

- Computed from information about mortality rates of older cohorts observed in 2018
- The *computed* LE will equal the *observed* average life length of a forty year old *if* mortality rates are constant
- ⇒ Measure *actual* average life length of forty year old individuals *if* society is unchanged



# Inequality in life expectancy

## LE by income class at age 40 in 2018

- Aim: measure the actual average life length by income class of forty year old individuals if society is unchanged

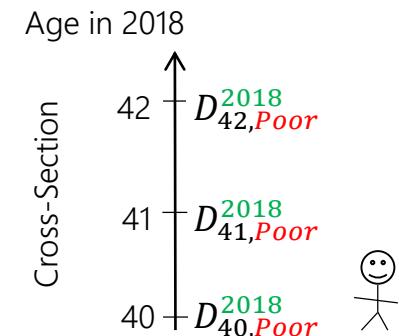
# Inequality in life expectancy

## LE by income class at age 40 in 2018

- Aim: measure the actual average life length by income class of forty year old individuals if society is unchanged

## Standard approach

- Use older cohorts in same income class in 2018
- PL equal to actual average life length by income class if *mortality rates are constant* and *mobility rates are zero* (poor at age 40 → poor at age 41, 42, ...)



# Inequality in life expectancy

## LE by income class at age 40 in 2018

- Aim: measure the actual average life length by income class of forty year old individuals if society is unchanged
- Unchanged society  $\Rightarrow$  constant *mortality* and *mobility* rates
- Aim: With constant *mortality* and *mobility* rates the computed LE by income class should equal the observed average life length of forty year old individuals by income class

# Is Income Mobility Important?

Substantial income mobility

From age 40 to 50:

1. About half of the 5 percent **poorest** move **up** the income distribution
2. About half of the 5 percent **richest** move **down** the income distribution

Income mobility is important for mortality

From age 50 to 60:

1. Those of the 5 percent **poorest** that move **up** are 50% **less** likely to die
2. Those of the 5 percent **richest** that move **down** are 40% **more** likely to die

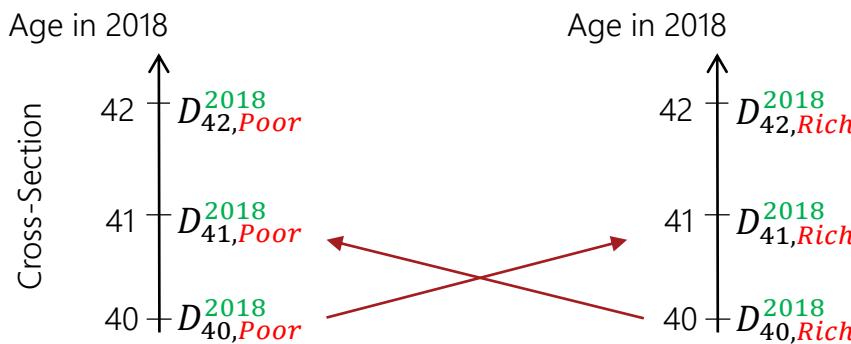
⇒ Standard approach is systematically biased  
Exaggerates inequality in life expectancy

# What we do

1. Demonstrate large upward bias in standard method
2. Develop new method to measure inequality in life expectancy  
Incorporates income mobility using classic model of social mobility from Sociology
3. Validate method by combining register data on income from tax returns with mortality records for all Danes since 1980
4. Provide new estimates of inequality in life expectancy

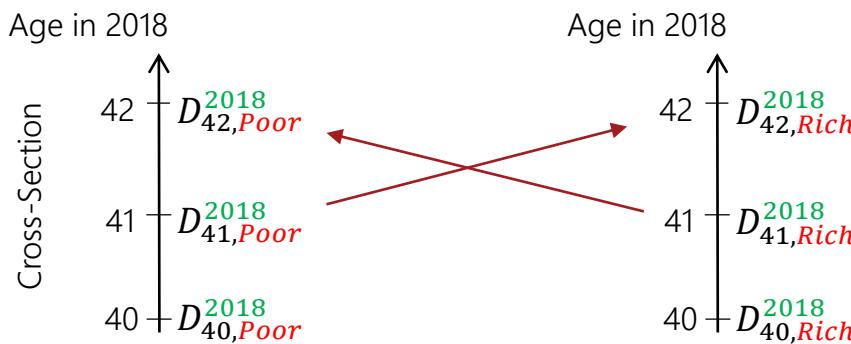
# Our Method

Use cross-sectional information about *mortality* and *mobility* rates of cohorts age  $\geq 40$  observed in a given year to predict mortality and mobility of age 40 individuals



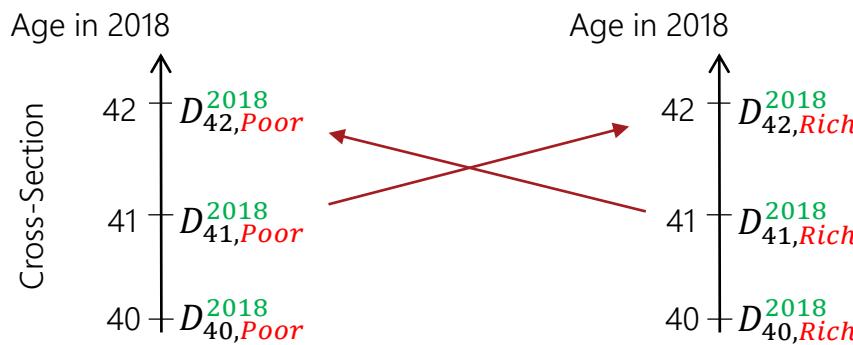
# Our Method

Use cross-sectional information about *mortality* and *mobility* rates of cohorts age  $\geq 40$  observed in a given year to predict mortality and mobility of age 40 individuals



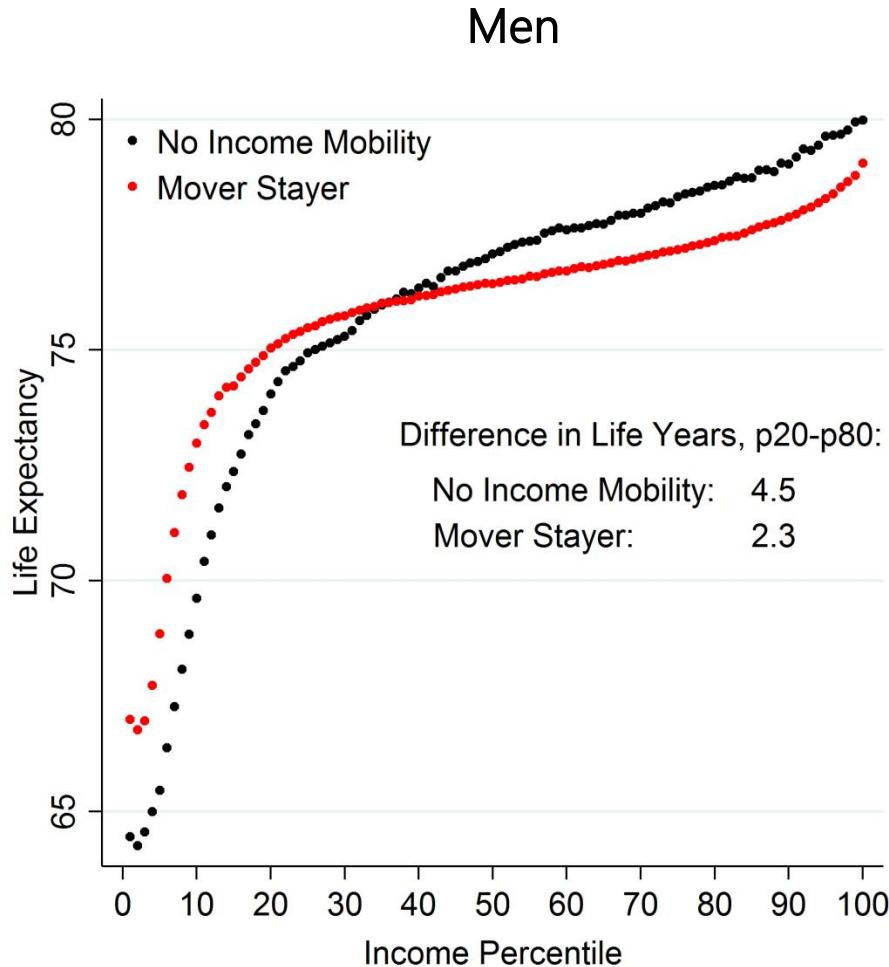
# Our Method

Use cross-sectional information about *mortality* and *mobility* rates of cohorts age  $\geq 40$  observed in a given year to predict mortality and mobility of age 40 individuals



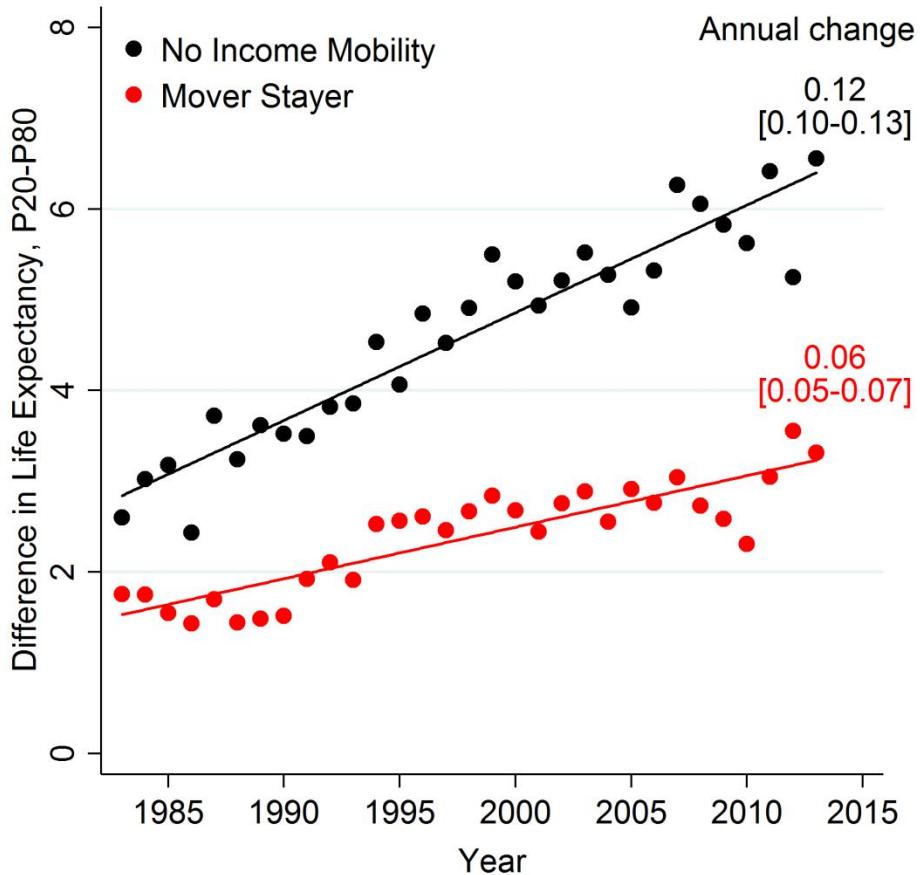
Validate method by using panel data on mortality and income for all Danes since 1980 (follow cohort + adjust analysis to account for time variation)

# LE inequality half as big as previously thought

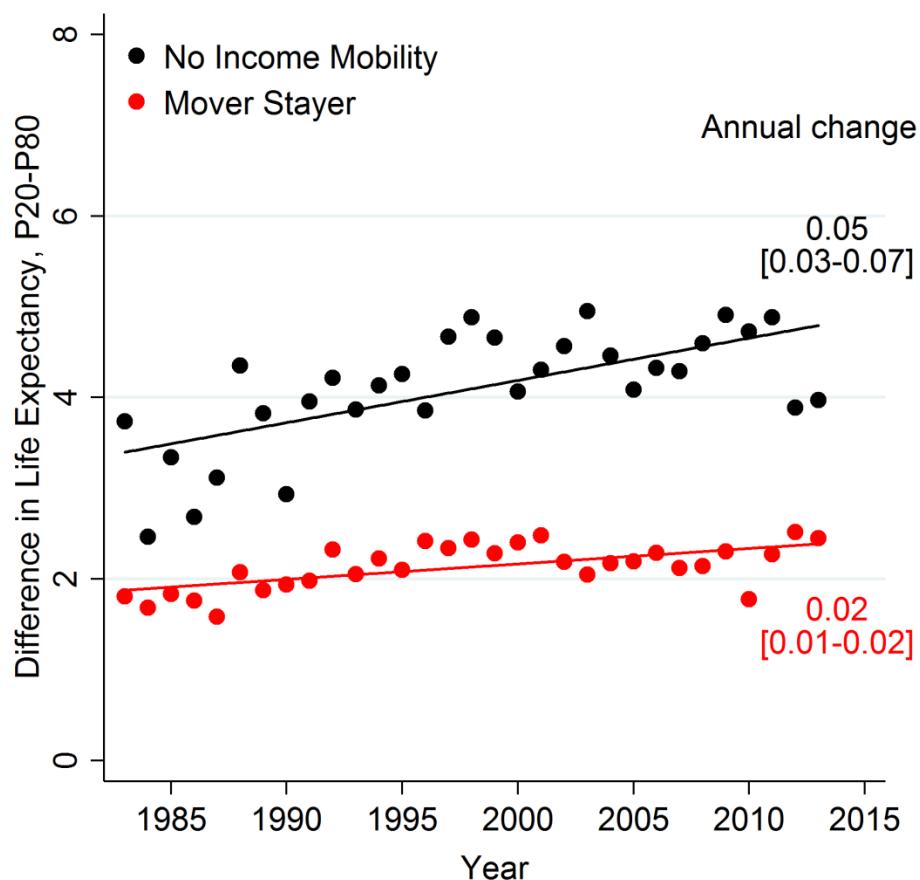


# LE inequality still increasing over time, but slope half as big

Men



Women



# CENTER FOR ECONOMIC BEHAVIOR & INEQUALITY

Claus Thustrup Kreiner  
Torben Heien Nielsen

NØF March 2019



Danmarks  
Grundforskningsfond  
Danish National  
Research Foundation

UNIVERSITY OF COPENHAGEN



## **Smittende Sundhedsadfærd**

### **Evidens fra sundhedschok i familien**

**(ENG: Family Health Behaviors,  
Accepted in American Economic Review)**

Itzik Fadlon (UC San Diego)  
Torben Heien Nielsen (Københavns Universitet)

# Motivation

## Sundhedsadfærd

Handlinger, investeringer eller forbrugsvælg, der påvirker sundheds- og mortalitetsrisiko, er nøgleinput i den individuelle produktion af sundhed

- Dårlige vaner: rygning og druk
- Gode vaner: Forebyggende adfærd (fx medicin)

# Motivation

## Sundhedsadfærd

Handlinger, investeringer eller forbrugsvælg, der påvirker sundheds- og mortalitetsrisiko, er nøgleinput den individuelle produktion af sundhed

- Dårlige vaner: rygning og druk
- Gode vaner: Forebyggende adfærd (fx medicin)

## Familien

Økonomisk forskning (teoretisk og empirisk) har lagt vægt på at familien er med til at forme individuel adfærd, fx

- Deler finanzielle resources
- Påvirker hvor meget vi arbejder

## Motivation

På samme måde spiller **familien** en kernerolle i vores **sundhedsadfærd**

- via en række kanaler:

- Informationsflow (om arv og miljø)
- Hvordan vi opfatter risici
- Normer
- Bevidsthed og opmærksomhed på risici

# Motivation

På samme måde spiller **familien** en kernerolle i vores **sundhedsadfærd**

- via en række kanaler:

- Informationsflow (om arv og miljø)
- Hvordan vi opfatter risici
- Normer
- Bevidsthed og opmærksomhed på risici

Men, at identificere en **kausale sammenhænge I hvordan familien smitter hinanden med forskellig adfærd er uhyre udfordrende**

- Uobserveret heterogenitet på tværs og indenfor generationer
- Store datakrav

## Overblik

- **I dette papir undersøger vi hvordan sundhedsadfærd har afsmittende effekter i familien**
- **Vi estimerer kausale effekter af et familiemedlems sundhedschok på øvrige familiemedlemmers forbrug af forebyggende medicin og indikationer på anvendelse af sundhedssektoren som relaterer sig til sundhedsadfærd**

## Overblik

- **I dette papir undersøger vi hvordan sundhedsadfærd har afsmittende effekter i familien**
- **Vi estimerer kausale effekter af et familiemedlems sundhedschok på øvrige familiemedlemmers forbrug af forebyggende medicin og indikationer på anvendelse af sundhedssektoren som relaterer sig til sundhedsadfærd**
- I dag fokuserer jeg på ægtefæller/samboende, voksne børn og søskende

## Overblik

- **Vores estimeringsstrategi beror på timingen af sundhedschok**
  - Vi følger familier hvor et medlem oplever et chok, og sammenligner outcomes med familier, der oplever det samme type chok ... **få år senere**
- Treatment og control er ens ex-ante, men realiseringstidspunktet af sundhedschok er forskellige.
  - Specifikt 5 års forskel i realiseringen
- På den måde kan vi følge hvordan adfærd spredes sig i familien som tiden går

## Data

- Vi identificerer familiebånd via Danmarks Statistikks befolkningsdatabaser
- Datasættet inkluderer
  - Medicinforbrug
  - Kontakt til lægen
  - Hospitalskontakter
  - Mortalitetsdatabaser
  - Arbejdssteder

# Beskrivende statistik

|                                    |           | År     | Alder | Uddannelse<br>(måneder) | Andel<br>Kvinder | Antal<br>Individer |
|------------------------------------|-----------|--------|-------|-------------------------|------------------|--------------------|
| <b><u>Kardiovaskulære chok</u></b> |           |        |       |                         |                  |                    |
| <b>Ægtefæller</b>                  |           |        |       |                         |                  |                    |
| Yngre (25-55)                      | Treatment | 2002   | 46.7  | 155.4                   | .72              | 20,381             |
|                                    | Control   | 2002   | 45.8  | 156.6                   | .704             | 28,699             |
| Ældre (55-85)                      | Treatment | 2002.2 | 65.7  | 136                     | .64              | 37,828             |
|                                    | Control   | 2002.1 | 64.6  | 139                     | .60              | 36,392             |
| <b>Voksne børn</b>                 |           |        |       |                         |                  |                    |
| Yngre (25-40)                      | Treatment | 2002   | 33.4  | 169                     | .492             | 63,323             |
|                                    | Control   | 2001.9 | 33.1  | 170                     | .492             | 68,437             |
| Ældre (40-65)                      | Treatment | 2002.4 | 44.6  | 166.3                   | .46              | 39,783             |
|                                    | Control   | 2002.3 | 44.14 | 167.4                   | .463             | 32,926             |
| <b>Søskende</b>                    |           |        |       |                         |                  |                    |
| Yngre (25-40)                      | Treatment | 2002.7 | 34.76 | 159.8                   | .497             | 6,172              |
|                                    | Control   | 2002.5 | 34.50 | 159.62                  | .488             | 11,809             |
| Ældre (40-65)                      | Treatment | 2003.5 | 45.5  | 155.7                   | .472             | 7,356              |
|                                    | Control   | 2003.4 | 45    | 156.2                   | .4735            | 10,143             |
| Svigersønner og –<br>døtre         | Treatment | 2002.6 | 38.7  | 168.7                   | .495             | 86,874             |
|                                    | Control   | 2002.5 | 37.7  | 169.4                   | .489             | 85,421             |
| Arbejdskolleger                    | Treatment | 2002.2 | 48.2  | 161.5                   | .37              | 63,122             |
|                                    | Control   | 2002.1 | 48.1  | 161.6                   | .38              | 83,087             |
| <b><u>Fatale chok</u></b>          |           |        |       |                         |                  |                    |
| <b>Ægtefæller</b>                  |           |        |       |                         |                  |                    |
|                                    | Treatment | 1996.5 | 63.2  | 118.3                   | .72              | 255,994            |
|                                    | Control   | 1996.4 | 62.4  | 119.9                   | .70              | 341,329            |
| <b>Voksne børn</b>                 |           |        |       |                         |                  |                    |
|                                    | Treatment | 2003.7 | 41.16 | 166.6                   | .47              | 324,594            |
|                                    | Control   | 2003.7 | 40.5  | 167.5                   | .473             | 395,861            |

## **Kardiovaskulære chok - Hovedresultater**

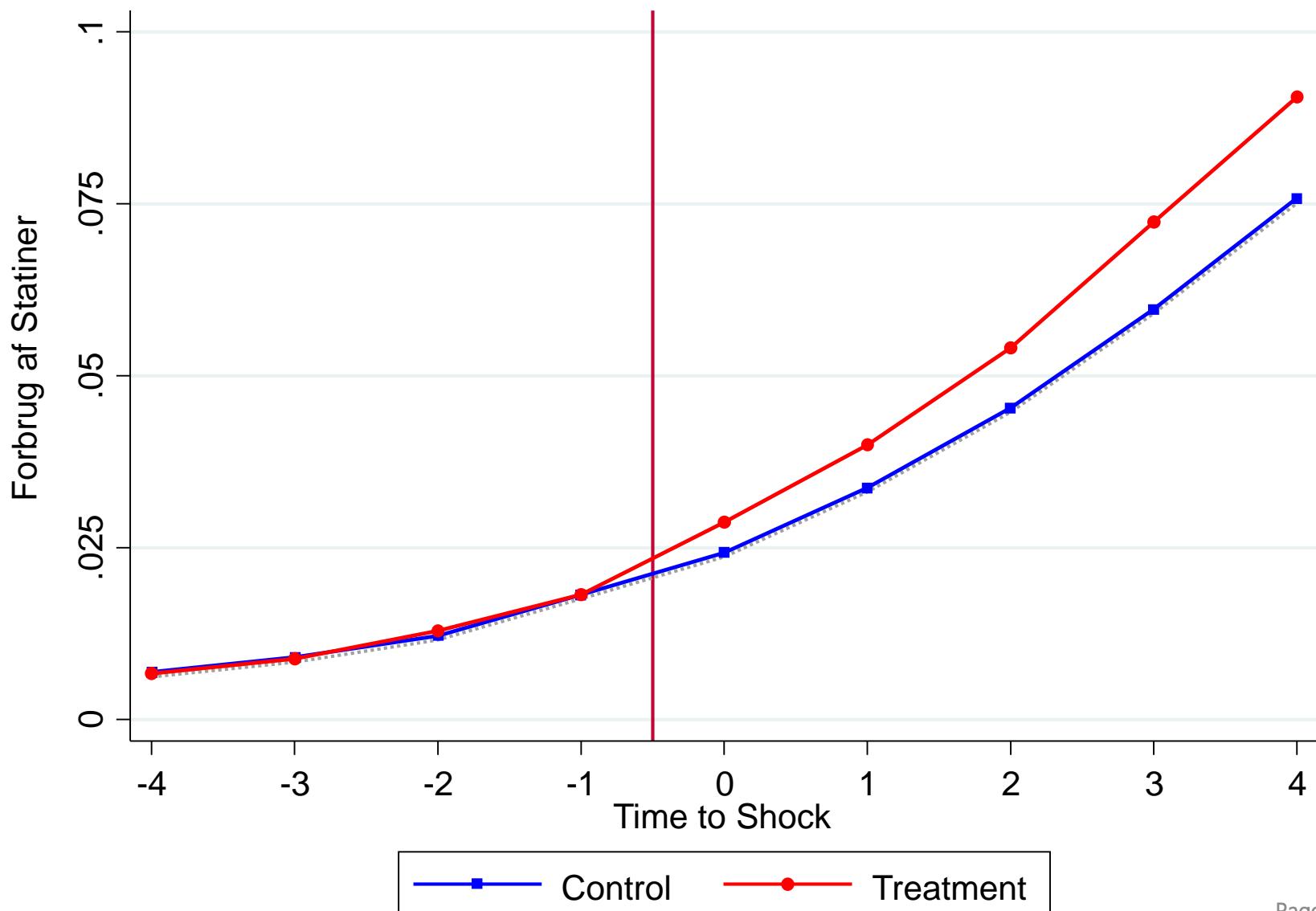
---

## Kardiovaskulære chok - Hovedresultater

- Vi undersøger *akut hjerteinfarkt* og *karsygdomme i hjernen*
- Hvordan påvirker de andre familiemedlemmers forebyggende adfærd?
- **Outcome: Statiner (forebyggende medicin)**
  - én pille om dagen (koster en krone)
  - sænker kolesterol i blodet  
og forebygger på den måde kardiovaskulære chok
  - Din læge vurderer din risiko på baggrund af
    - **Blodprøve** (der mäter kolesterolniveauet i blodet)
    - + alder, køn, forhøjet blodtryk, rygerstatus, diabetiker

# Ægtefælles forbrug af forebyggende medicin

## Statinforbrug for ægtefæller i deres velmagtsdage (25-55 år)

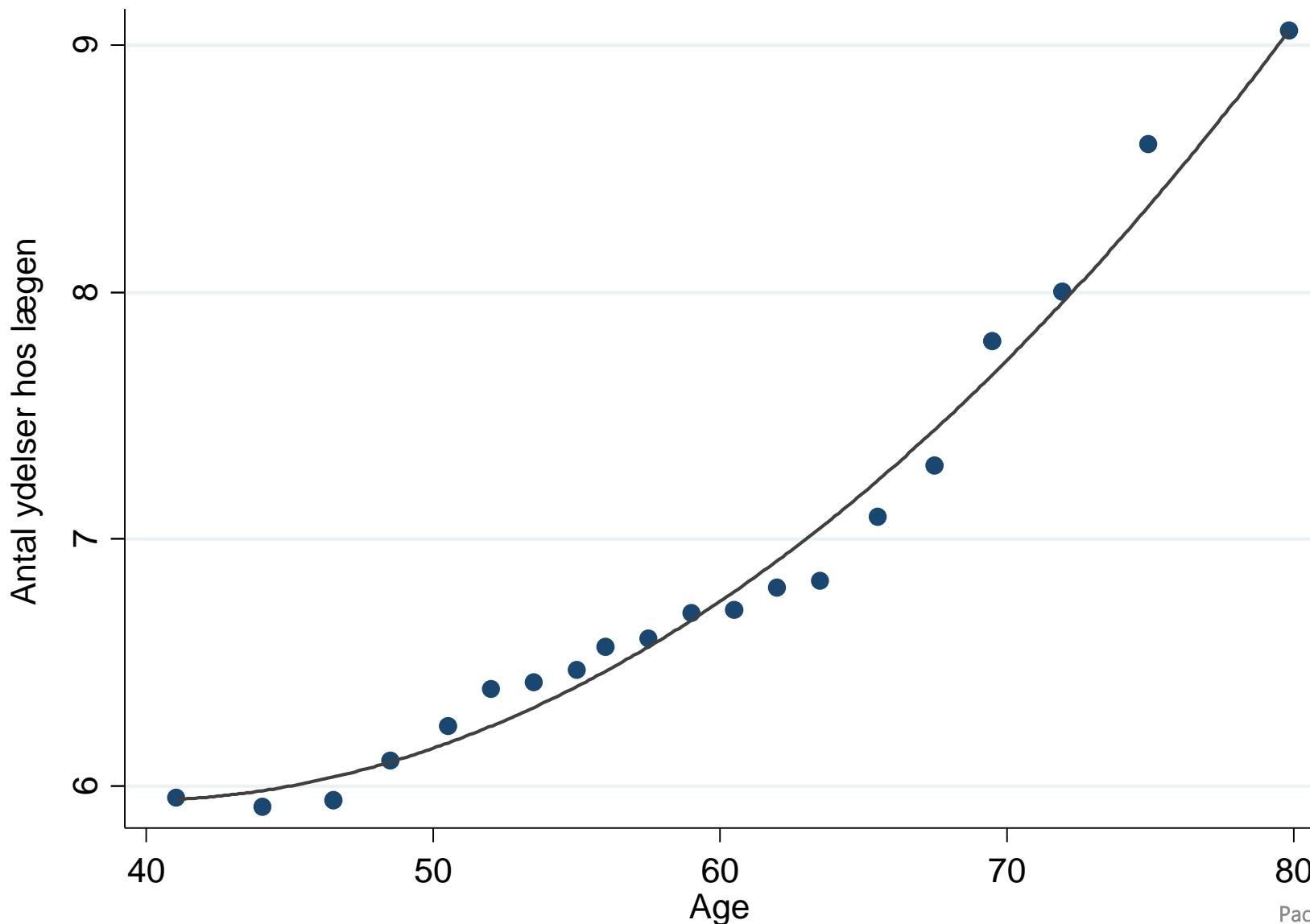


# Ægtefælles forbrug af forebyggende medicin

| Velmagtsdage<br>(25-55 år) |                     |
|----------------------------|---------------------|
|                            | (1)                 |
| -4                         | .0005<br>(.0010)    |
| -3                         | .0003<br>(.0010)    |
| -2                         | .0010<br>(.0008)    |
| -1                         | 0<br>0              |
| 0                          | .0039***<br>(.0010) |
| 1                          | .0051***<br>(.0013) |
| 2                          | .0070***<br>(.0017) |
| 3                          | .0101***<br>(.0020) |
| 4                          | .0117***<br>(.0023) |
| Counterfactual             | .0786               |
| % ændring                  | 14.90%              |
| Antal Obs.                 | 441,720             |
| Antal Klynger              | 49,080              |

# Ægtefælles forbrug af forebyggende medicin

## Interaktion med sundhedssystemet, $f(\text{alder})$

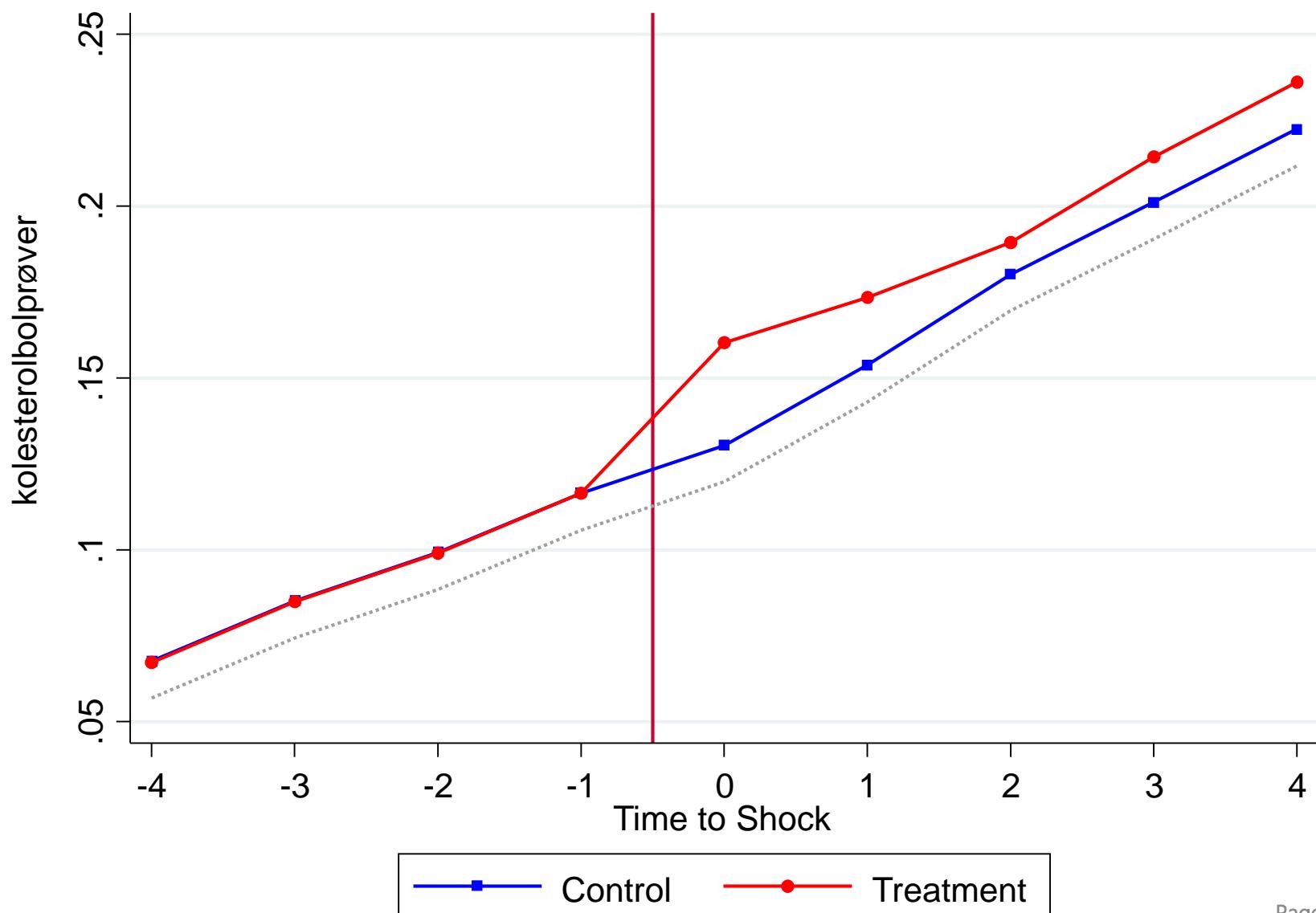


# Ægtefælles forbrug af forebyggende medicin

|                | Velmagtsdage<br>(25-55 år)<br>(1) | Ældre<br>(55-85 år)<br>(2) |
|----------------|-----------------------------------|----------------------------|
| -4             | .0005<br>(.0010)                  | -.0007<br>(.0016)          |
| -3             | .0003<br>(.0010)                  | -.0006<br>(.0014)          |
| -2             | .0010<br>(.0008)                  | -.0007<br>(.0011)          |
| -1             | 0<br>0                            | 0<br>0                     |
| 0              | .0039***<br>(.0010)               | .0023*<br>(.0012)          |
| 1              | .0051***<br>(.0013)               | .0093***<br>(.0018)        |
| 2              | .0070***<br>(.0017)               | .0109***<br>(.0022)        |
| 3              | .0101***<br>(.0020)               | .0104***<br>(.0025)        |
| 4              | .0117***<br>(.0023)               | .0123***<br>(.0028)        |
| Counterfactual | .0786                             | .2284                      |
| % ændring      | 14.90%                            | 5.40%                      |
| Antal Obs.     | 441,720                           | 667,980                    |
| Antal Klynger  | 49,080                            | 74,220                     |

# Ægtefælles informationssøgning

## Kolesterolblodprøver



# Ægtefælles forebyggende adfærd

|                | Velmagtsdage<br>(25-55 år)<br>(1) | Ældre<br>(55-85 år)<br>(2) | Kolesterol<br>Test<br>(3) |
|----------------|-----------------------------------|----------------------------|---------------------------|
| -4             | .0005<br>(.0010)                  | -.0007<br>(.0016)          | -.0014<br>(.0044)         |
| -3             | .0003<br>(.0010)                  | -.0006<br>(.0014)          | -.0011<br>(.0046)         |
| -2             | .0010<br>(.0008)                  | -.0007<br>(.0011)          | -.0006<br>(.0045)         |
| -1             | 0<br>0                            | 0<br>0                     | 0<br>0                    |
| 0              | .0039***<br>(.0010)               | .0023*<br>(.0012)          | .0303***<br>(.0050)       |
| 1              | .0051***<br>(.0013)               | .0093***<br>(.0018)        | .0205***<br>(.0051)       |
| 2              | .0070***<br>(.0017)               | .0109***<br>(.0022)        | .0110**<br>(.0054)        |
| 3              | .0101***<br>(.0020)               | .0104***<br>(.0025)        | .0157***<br>(.0057)       |
| 4              | .0117***<br>(.0023)               | .0123***<br>(.0028)        | .0172***<br>(.0059)       |
| Counterfactual | .0786                             | .2284                      | .1031                     |
| % ændring      | 14.90%                            | 5.40%                      | 29.4%                     |
| Antal Obs.     | 441,720                           | 667,980                    | 214,793                   |
| Antal Klynger  | 49,080                            | 74,220                     | 23,866                    |

## **Kardiovaskulære chok - Mekanismer**

---

## Heterogenitet

- Regearer folk mere hvis de er i højere risiko for kardiovaskulære chok?

## Ægtefællerespons og baggrundsrisiko

- I økonometri-ord:  
Interagerer det event-drevne forbrug med baggrundsrisici?
- Vi prædikterer den underliggende risiko på baggrund af
  - Alder, køn, forhøjet blodtryk, diabetes og uddannelse
- Og interagerer vores dif-in-dif estimator
- $y_{i,t} = \alpha + \beta treat_i + \gamma post_{i,t} + \delta_i treat_i \times post_{i,t} + \lambda X_{i,t} + \varepsilon_{i,t}$ 
  - hvor:  $\delta_i = \delta_0 + \delta_1 High\ Risk_i$

# Ægtefællerespons og baggrundsrisiko

| ægtefællers<br>Statin forbrug |                     |
|-------------------------------|---------------------|
| Treat x Post                  | .0043**<br>(.0020)  |
| Treat x Post x<br>High Risk   | .0108***<br>(.0030) |
| Antal Obs.                    | 715,692             |
| Antal klynger                 | 119,282             |

# Ægtefællerespons og baggrundsrisiko

|                             | Ægtefællers<br>Kolesterol<br>Test | Ægtefællers<br>Statin forbrug<br>Test |
|-----------------------------|-----------------------------------|---------------------------------------|
| Treat x Post                | 0.0142***<br>(0.0043)             | .0019<br>(.0030)                      |
| Treat x Post x<br>High Risk | 0.0032<br>(.0055)                 | .0097**<br>(.0047)                    |
| Antal Obs.                  | 231,519                           | 202,199                               |
| Antal Klynger               | 28,940                            | 28,940                                |

## Heterogenitet

- Hvad nu hvis folk allerede har risikoinformation fra tidlige tests?

## Kan vi komme tættere på mekanismen?

- Ægtefæller, der allerede er blevet testet, har mere information om deres risiko...

## Kan vi komme tættere på mekanismen?

- Ægtefæller, der allerede er blevet testet, har mere information om deres risiko...
- ...men reagerer alligevel

| Ægtefælles<br>Statin forbrug<br>(1) |                    |
|-------------------------------------|--------------------|
| Treat x Post                        | .0178**<br>(.0080) |
| Antal obs.                          | 45,787             |
| Antal klynger                       | 6,541              |

## Delkonklusion

- Tilsammen viser resultaterne indtil videre, at
  - Folk reagerer mere på chok I familien,
  - Hvis de har højere risiko
    - Dvs. ny information driver noget af adfærdens
  - Men øget opmærksomhed og tydeligheden af chokket spiller også en rolle (salience)
    - Folk med information reagerer også

## **Kardiovaskulære chok - Mekanismer**

---

## Intergenerationelle effekter

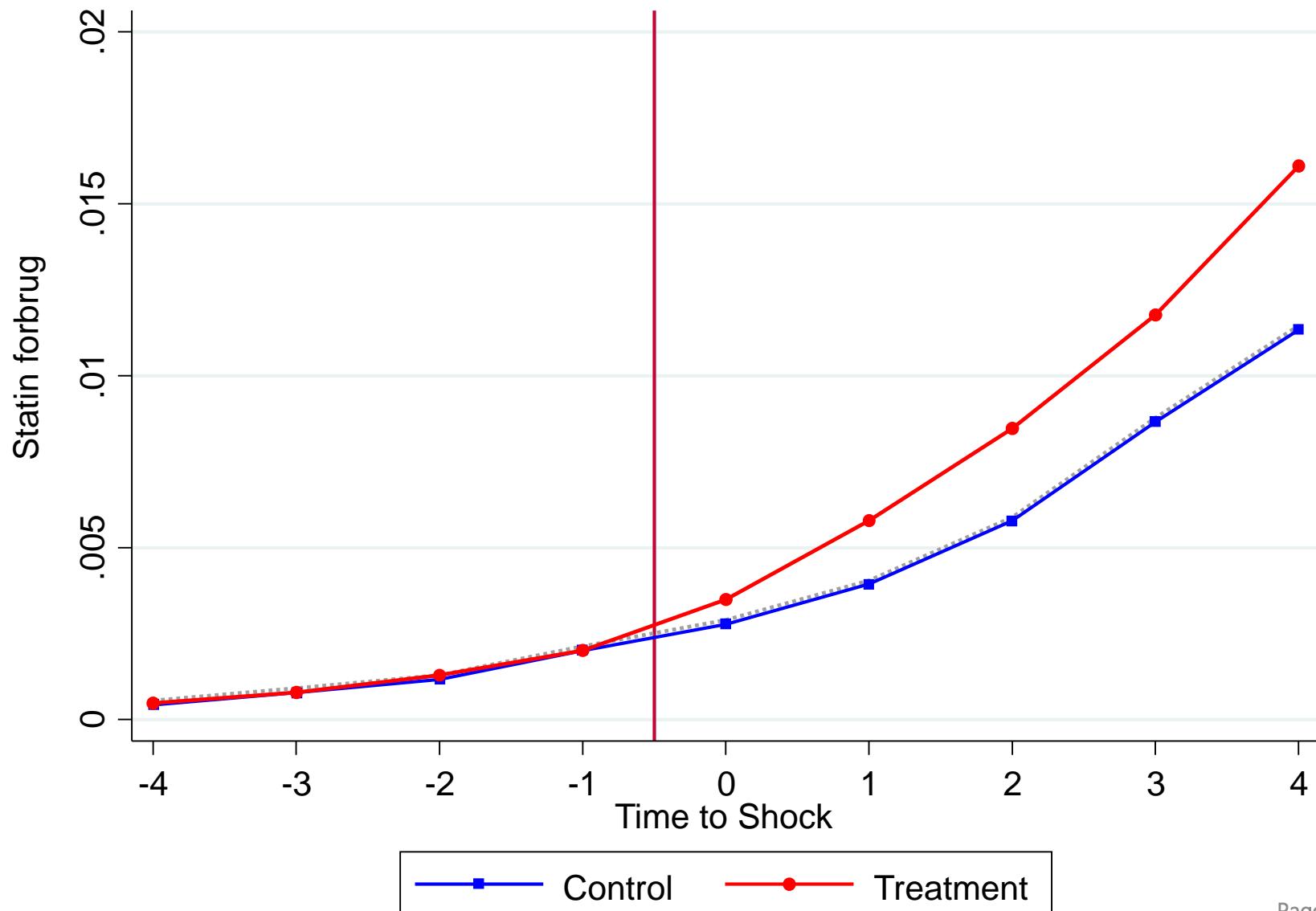
- Vi har indtil nu set på effekter på ægtefællers adfærd
  - Her løber der **ikke** en blodlinje mellem familiemedlemmerne

## Intergenerationelle effekter

- Vi har indtil nu set på effekter på ægtefællers adfærd
  - Her løber der **ikke** en blodlinje mellem familiemedlemmerne
  - Det gør der fra **forældre til børn**
  - Ved at undersøge effekter på børns adfærd kommer vi nærmere på ny information om en arvelige risiko

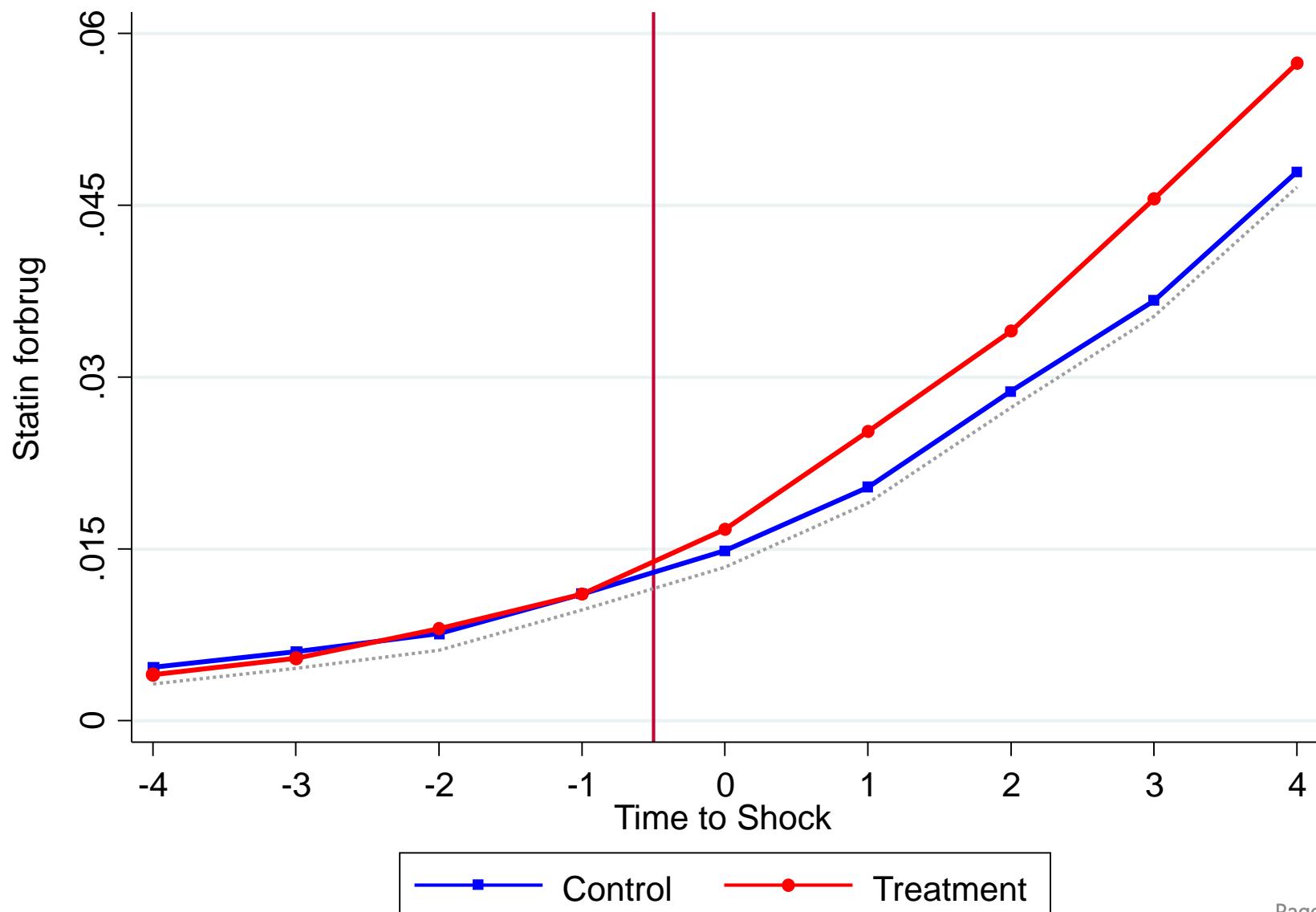
# Voksne børn

## Statin forbrug by yngre børn (25-40 år)



# Voksne børn

## Statin forbrug by yngre børn (40-65 år)



## Voksne børn

- Et **tidligt chok** hos en forældre indeholder **mere information** for barnet om den arvelige risiko
- Derfor undersøger vi **om børn hvis forældre var yngre da de oplevede chokket reagerer mere...**

## Voksne børn

- Et **tidligt chok** hos en forældre indeholder **mere information** for barnet om den arvelige risiko
- Derfor undersøger vi **om børn hvis forældre var yngre da de oplevede chokket reagerer mere...**

---

### Børn's Statin Forbrug

---

|              |                        |
|--------------|------------------------|
| Treat x Post | -.00023***<br>(.00008) |
| Parent's Age | .00059***<br>(.0001)   |
| Treat x Post | -.00023***<br>(.00008) |
| Own Age      | .00059***<br>(.0001)   |

---

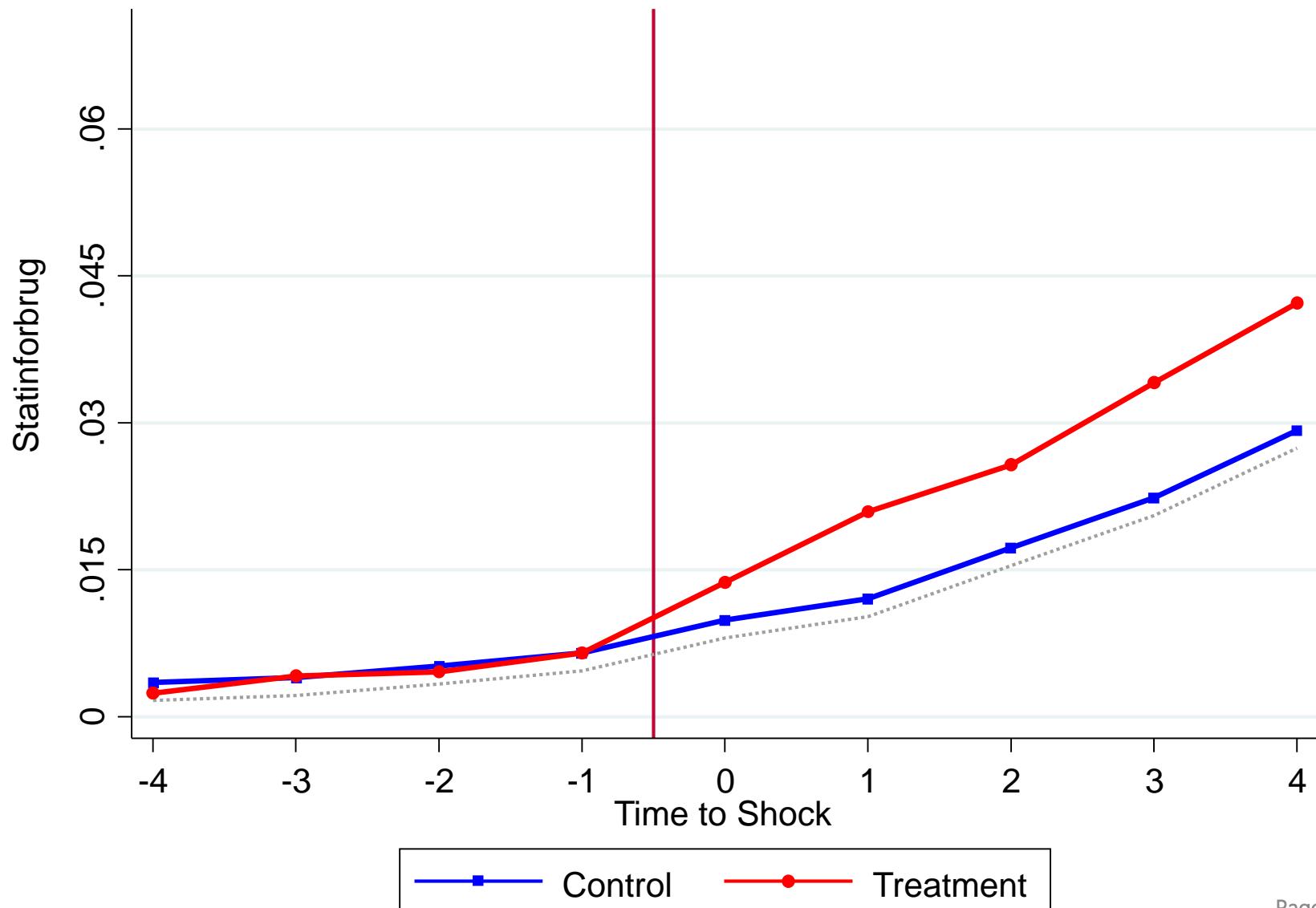
|               |           |
|---------------|-----------|
| Antal Obs.    | 1,548,616 |
| Antal klynger | 97,265    |

## Intragenerationelle effekter

- Søskende bakker denne analyse op.
  - Her er alders- og informationsgabet mellem den der oplever chokket og den adfærd den smitter af på minimeret

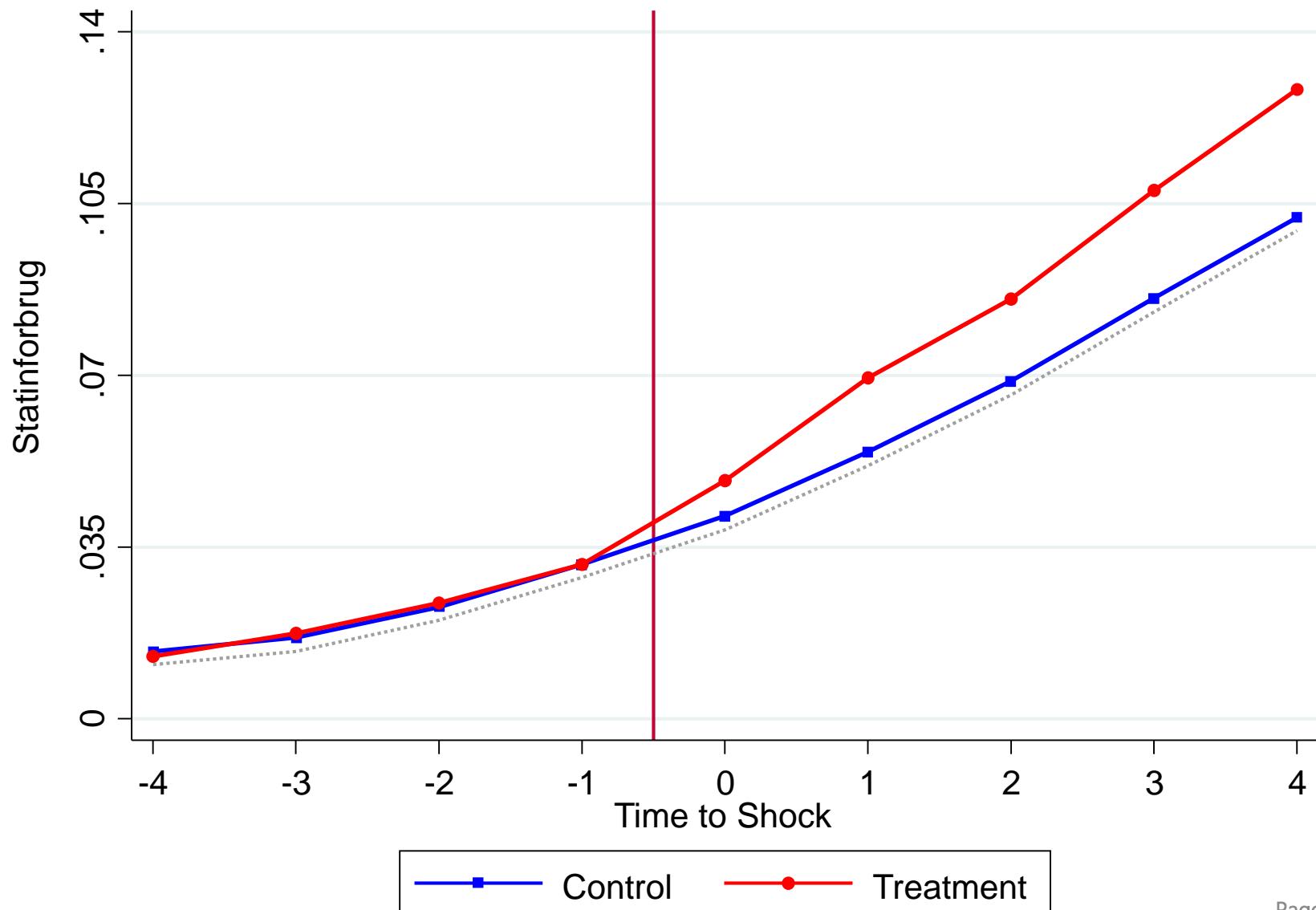
# Intragenerationelle effekter

Statin forbrug af Søskende (25-40 år)



# Intragenerationelle effekter

Statin forbrug af Søskende (25-40 år)



## I papiret finder vi

- At også svigerbørnene reagerer

## I papiret finder vi

- At også svigerbørnene reagerer
  - **Men kun hvis de bor tæt på den der blev ramt...**

## I papiret finder vi

- At også svigerbørnene reagerer
  - Men kun hvis de bor tæt på den der blev ramt...
    - **(så ude af synе ude af sind...)**

## I papiret finder vi

- At også svigerbørnene reagerer
  - Men kun hvis de bor tæt på den der blev ramt...
    - (så ude af synet ude af sind...)
- **Arbejdskollegør reagerer**

## I papiret finder vi

- At også svigerbørnene reagerer
  - Men kun hvis de bor tæt på den der blev ramt...
    - (så ude af syns ude af sind...)
- Arbejdskollegør reagerer
  - **Men kun hvis de er tætte... (samme alder og stilling)**

## I papiret finder vi

- **Familier reagerer også på fatale chok**

## I papiret finder vi

- **Familier reagerer også på fatale chok**
  - Men I højere grad ved at forebygge selve dødsårsagen

## I papiret finder vi

- **Familier reagerer også på fatale chok**
  - Men I højere grad ved at forebygge selve dødsårsagen
  - **Og nogen evidens for crowding out af andre risikoforebyggende behandlinger (et dårligt “nudge”)**

## I papiret finder vi

- **Familier reagerer også på fatale chok**
  - Men I højere grad ved at forebygge selve dødsårsagen
  - Og nogen evidens for crowding out af andre risikoforebyggende behandlinger (et dårligt “nudge”)
- **Og selv hvis der ikke er information i chokket**

## I papiret finder vi

- **Familier reagerer også på fatale chok**
  - Men I højere grad ved at forebygge selve dødsårsagen
  - Og nogen evidens for crowding out af andre risikoforebyggende behandlinger (potentielt et dårligt “nudge”)
  - Og selv hvis der ikke er information i chokket  
*mænd reagerer med øget cancer screening hvis konen døde af bryst- eller ovariecancer*

## Konklusion

- Vi finder kausale smittende sundhedsadfærd I familien
  - Og det drives gennem mange kanaler
  - Direkte afsløring af en arvelig risiko
  - Indirekte afsløring af ny information (vi lærer at vi er opvokset I et usundt miljø)
  - Salience og opmærksomhed

## Policy anbefalinger

- Policy-anbefalinger:
  - Ligesom andre typer humankapital er sundhed også påvirkeligt gennem forbedret adfærd
  - Potentiale for reduktion i ulighed
  - Udnyt situationer, hvor familien er modtagelig for sundhedsforbedrende adfærd:  
Negative hændelser kan have positive konsekvenser for andre
  - Men vær opmærksom på potentielt dårlige “nudges”

# www.econ.ku.dk/cebi/

UNIVERSITY OF COPENHAGEN

Map | Phone Book | KUnet | Dansk 

Study at UCPH | Research | News | Collaboration | Employment | About UCPH

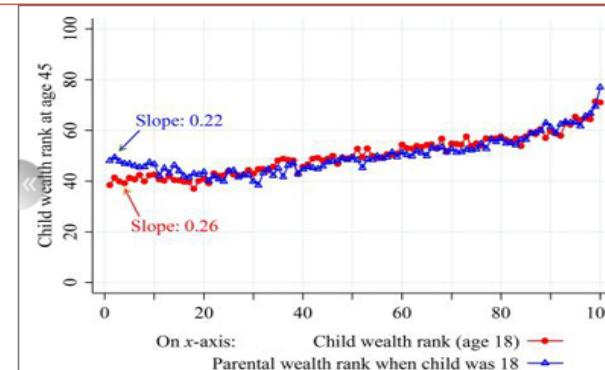
 | All  

Center for Economic Behavior and  
Inequality (CEBI)  
Department of Economics

**CEBI**

- About CEBI
- People
- Research
- Publications
- Experiments
- News
- Events
- Contact

➤ Department of Economics



Childhood wealth is a strong predictor of wealth in adulthood nearly three decades later

[READ MORE >](#)**News**

Research on family health behaviors by Torben Heien Nielsen one of the most important research results in 2018

2019.01.09

The research, nominated by professor Emely Oster, Brown University, in Quartz, finds that having a... »

Claus Thustrup Kreiner presents research on tax compliance at an invited talk for the Swedish Tax Agency

2018.12.12

The presentation "Lessons about tax evasion and tax avoidance from collaboration with the Danish tax... »

**PEOPLE****PUBLICATIONS****Events**

7 Feb 2019

Tobias Renkin, Danmarks Nationalbank

"The Pass-Through of Minimum Wages into US Retail Prices: Evidence from Supermarket Scanner Data". ... »

28 Feb 2019

Gaute Torsvik, University of Oslo

Seminar arranged by Center for Economic Behavior and Inequality (CEBI) ... »