

# Socioeconomic inequalities in the use of NHS care in England

ment & Emergency



- The NHS was founded on the principle that access to health care should be determined solely by clinical need
- But is the use of NHS care determined only by clinical need?
  - Do individuals with the same health needs but different socioeconomic status use different amounts of care?
- Our research: an empirical investigation into variation in hospital use between different education groups in England

# Health care inequalities

- Individuals differ in their need for health care
- Those with more formal education are, on average, in better health
  - We would therefore expect different patterns of use
- We exploit new data linking detailed survey responses from English Longitudinal Study of Ageing to NHS hospital records
  - Allows us to carefully control for individuals' health status
  - A large advance in data quality and scope

# Individual-level data

- Use data from English Longitudinal Study of Ageing (ELSA) covering the period from 2004–05 to 2014–15
  - Focus on those aged 65 and above
  
- Contains detailed information on individual characteristics
  - **Demographics** (age, sex, ethnicity, couple status, etc.)
  - **Health status** (self-reported health, disease history, etc.)
  - **Education** as a proxy for socioeconomic status
    1. **Low:** no formal qualifications
    2. **Mid:** finished school (O Level, A Level or equivalent)
    3. **High:** higher education below degree or degree equivalent

# How does health status vary by education?



	Education level		
	Low	Mid	High
<i>Percentage reporting:</i>			
<i>Mean number of reported:</i>			
Observations	9,611	9,688	6,565

ADLs and IADLs denote activities of daily living and instrumental activities of daily living, respectively. Full notes and sources: see Table 1 of Stoye et al. (2020), 'Educational Inequalities In Hospital Use Among Older Adults in England, 2004–2015', The Milbank Quarterly.

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	Education level		
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<i>Percentage reporting:</i>			
Very good health	23%	34%	42%
Good health	31%	35%	36%
Poor health	46%	31%	22%
<i>Mean number of reported:</i>			
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Very good health	23%	34%	42%
Good health	31%	35%	36%
Poor health	46%	31%	22%
Longstanding illness	66%	60%	58%
Limiting & longstanding illness	48%	39%	35%
<i>Mean number of reported:</i>			
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Longstanding illness	66%	60%	58%
Limiting & longstanding illness	48%	39%	35%
<i>Mean number of reported:</i>			
Difficulties with mobility	3.09	2.29	1.75
Difficulties with ADLs	0.62	0.43	0.32
Difficulties with IADLs	0.78	0.46	0.34
Observations	9,611	9,688	6,565

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# Linked to NHS hospital records



- Hospital Episode Statistics: records of all visits to public hospitals
  
- We focus on three types of hospital care
  - 1. Accident & Emergency**
    - Unplanned treatment in the emergency department
  - 2. Outpatient care**
    - Patient is referred to hospital but doesn't need to stay overnight
  - 3. Inpatient (admitted patient) care**
    - Split between emergency and elective (pre-planned) admissions

# How does hospital use vary by education?



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<i>Mean number in previous year:</i>			
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# How does hospital use vary by education?

	Education level		
	Low	Mid	High
<i>Mean number in previous year:</i>			
Accident & Emergency visits	0.30	0.24	0.21
Observations	9,611	9,688	6,565

- Note: none of this controls for differences in underlying need for health care

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# How does hospital use vary by education?



	Education level		
	Low	Mid	High
<i>Mean number in previous year:</i>			
Accident & Emergency visits	0.30	0.24	0.21
Outpatient visits	2.44	2.48	2.43
Observations	9,611	9,688	6,565

- Note: none of this controls for differences in underlying need for health care

Full notes and sources: see Table 1 of Stoye et al. (2020), 'Educational Inequalities In Hospital Use Among Older Adults in England, 2004–2015', The Milbank Quarterly.

# How does hospital use vary by education?



	Education level		
	Low	Mid	High
<i>Mean number in previous year:</i>			
Accident & Emergency visits	0.30	0.24	0.21
Outpatient visits	2.44	2.48	2.43
Emergency inpatient admissions	0.38	0.35	0.35
Observations	9,611	9,688	6,565

- Note: none of this controls for differences in underlying need for health care

Full notes and sources: see Table 1 of Stoye et al. (2020), 'Educational Inequalities In Hospital Use Among Older Adults in England, 2004–2015', The Milbank Quarterly.

# How does hospital use vary by education?

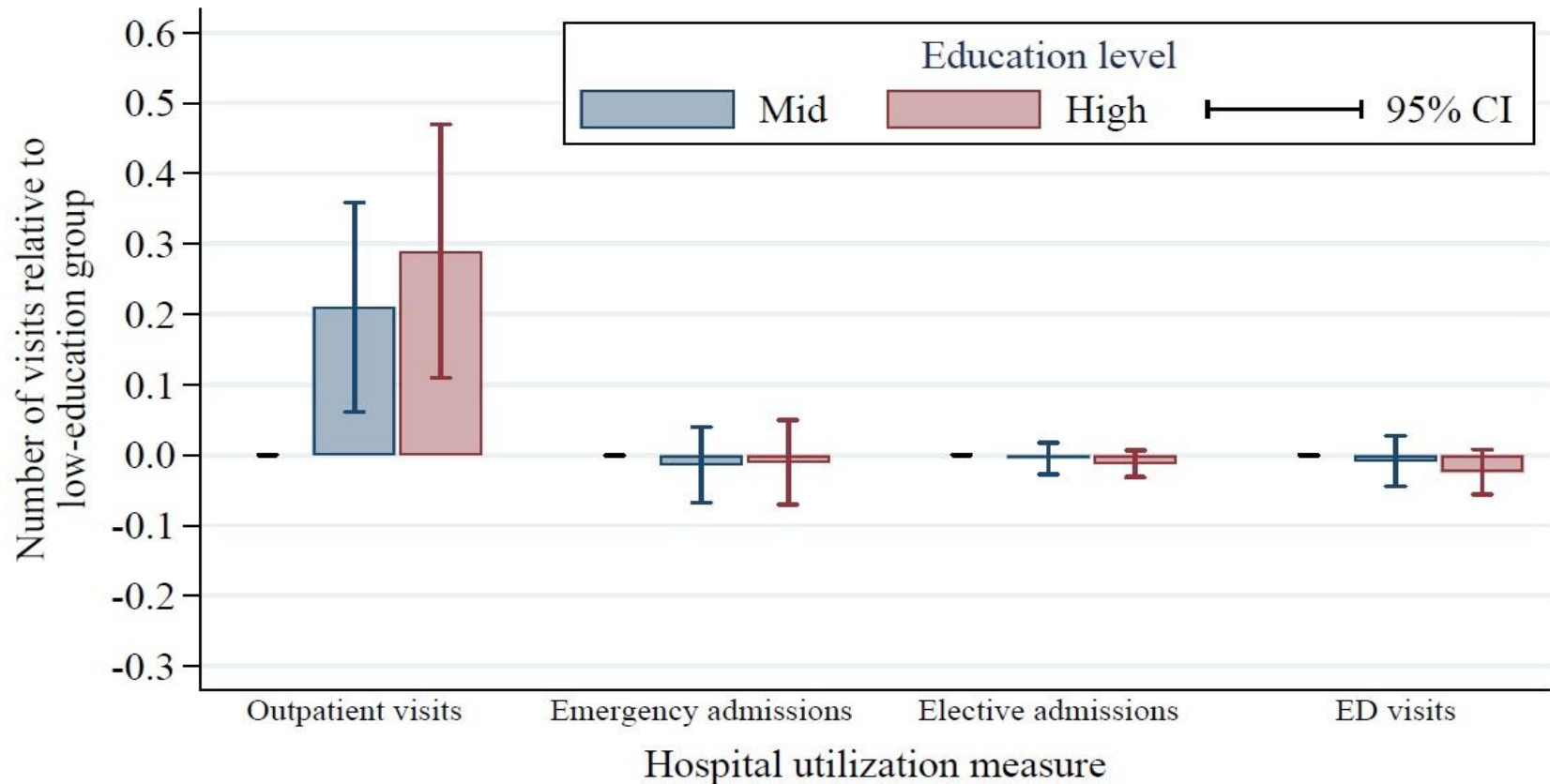
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	Low	Mid	High
<i>Mean number in previous year:</i>			
Accident & Emergency visits	0.30	0.24	0.21
Outpatient visits	2.44	2.48	2.43
Emergency inpatient admissions	0.38	0.35	0.35
Elective inpatient admissions	0.20	0.14	0.12
Observations	9,611	9,688	6,565

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# After controlling for health status, the highly educated use more NHS outpatient care

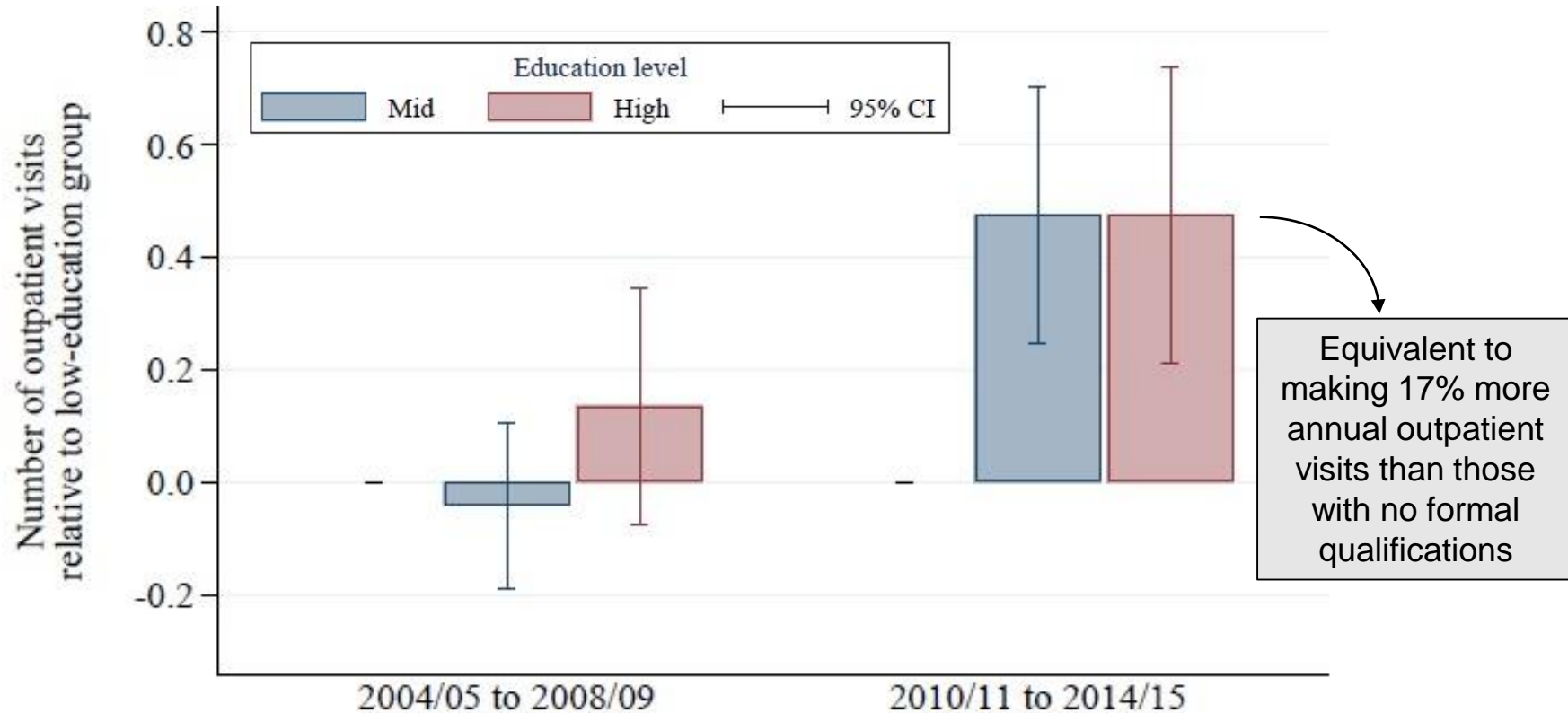
Number of annual hospital visits by mid- and high-educated, relative to low-education group, after controlling for health status



Notes and sources: see Figure 3 of Stoye et al. (2020), 'Educational Inequalities In Hospital Use Among Older Adults in England, 2004–2015', The Milbank Quarterly.

# These gaps emerged only after 2010

Number of annual outpatient visits by mid- and high-educated, relative to low-education group, after controlling for health status



Notes and sources: see Figure 5 of Stoye et al. (2020), 'Educational Inequalities In Hospital Use Among Older Adults in England, 2004–2015', The Milbank Quarterly.



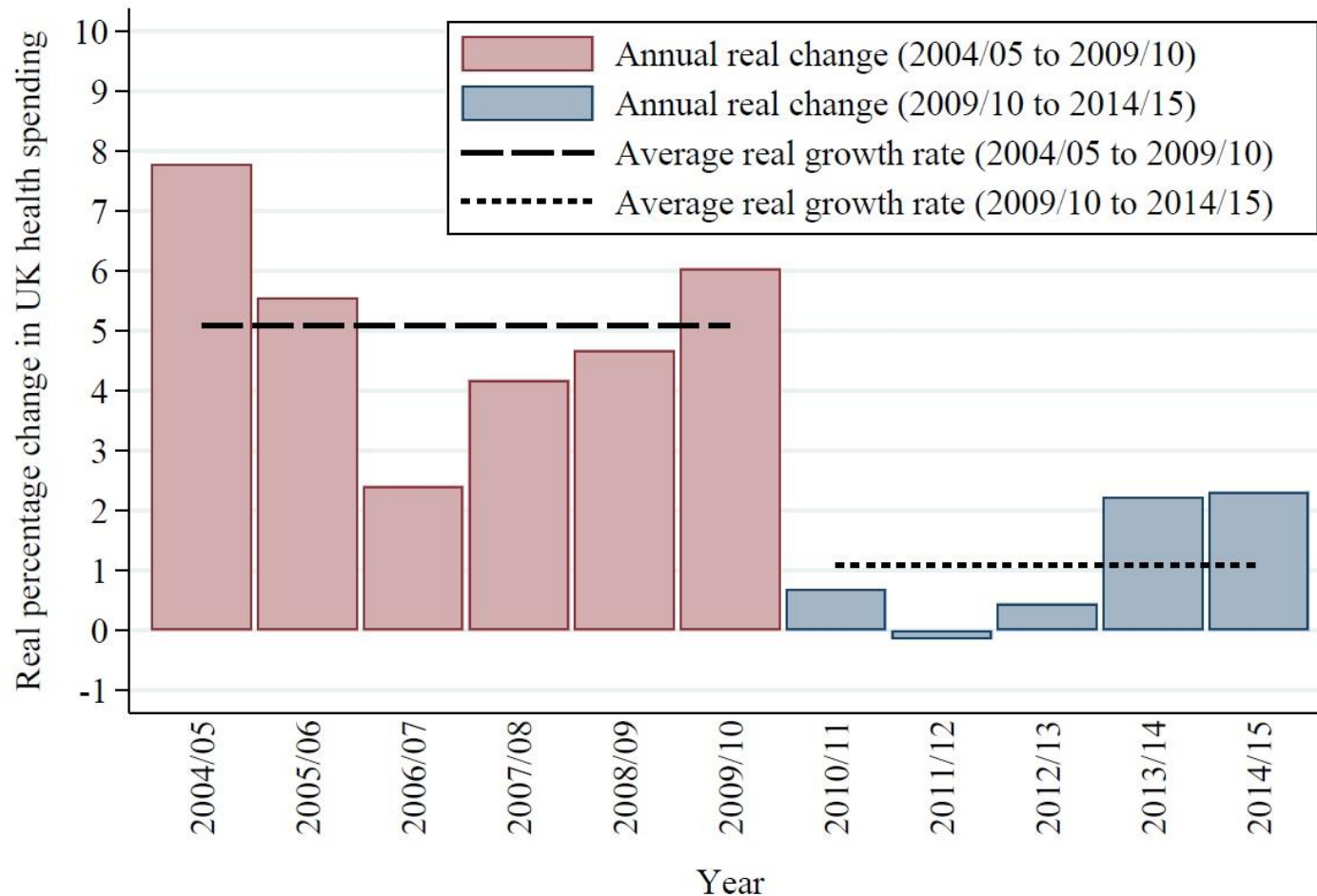
# Our results: a summary

- Prior to 2010: no statistically significant differences between groups
- After 2010, individuals with higher education made 17% more **outpatient** hospital visits than those with no formal qualifications
  - Driven by greater use of routine and follow-up appointments
  - No differences in number of urgent or 'two week' cancer referrals
- No evidence of differences in the number of inpatient admissions
  - True of both emergency and elective admissions
- Some evidence that, after 2010, highly educated used *less* A&E care than less educated individuals with similar levels of need

# Discussion

- The NHS does a good job of limiting socioeconomic differences in use of inpatient hospital services and urgent outpatient care
- Inequalities in use of routine outpatient care emerged after 2010, as the pace of NHS funding growth slowed sharply

# NHS funding growth slowed sharply after 2010



Notes and sources: see Figure 1 of Stoye et al. (2020), 'Educational Inequalities In Hospital Use Among Older Adults in England, 2004–2015', The Milbank Quarterly.

- Further research required to understand what drives these differences and why the gap opened up after 2010
  
- Possible explanations include differences in:
  - Access to care when services are being rationed
    - Including ability to navigate informational and cultural barriers
  
  - Health care professionals' referral behaviour
  
  - Tastes and preferences for certain kinds of medical care
  
  - Ability to engage with and adhere to treatment

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