



The
Martin House
RESEARCH CENTRE

In partnership with



UNIVERSITY
of York

Regular GP consultations are associated
with reduced rates of emergency care for
children and young people with life
limiting conditions

Stuart Jarvis & Lorna Fraser

Martin House Research Centre, University of York,
UK

www.york.ac.uk/mhrc | [@UoYMHRC](https://twitter.com/UoYMHRC)

Emergency care & primary care

- Children and young people with life limiting conditions have complex healthcare needs
 - 14-19% 'clinically unstable'[1]
- In UK, care pre-16 is coordinated by paediatric specialist
 - Not all children and young people regularly see GP
- Children with medical complexity who have 'well child visits' have fewer hospitalisations in the US[2]

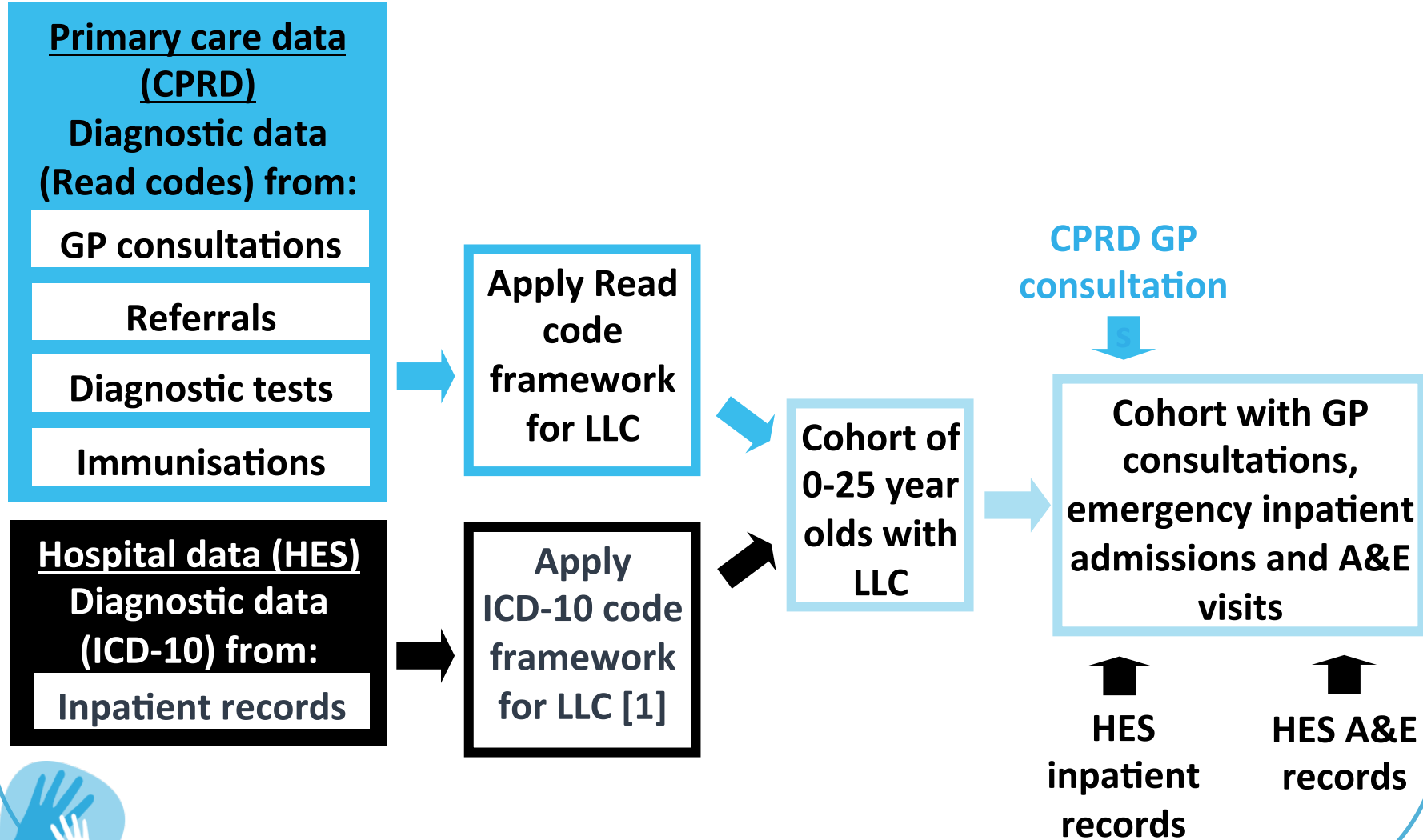


Research question

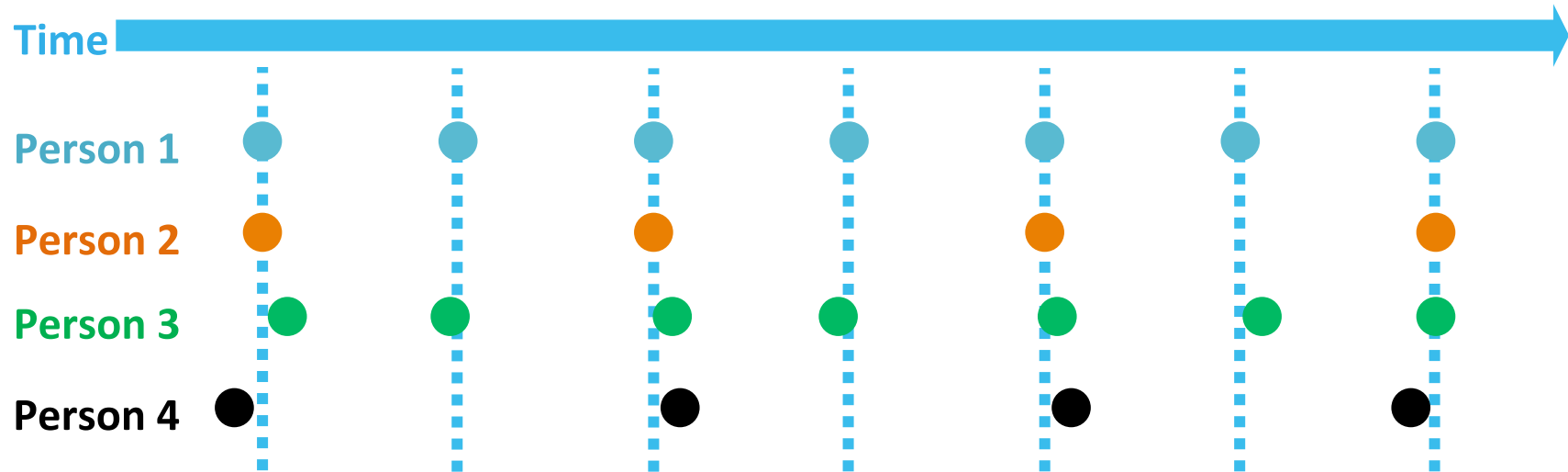
- Does seeing the GP regularly reduce emergency care?
 - Accident and Emergency (A&E) visits
 - Emergency inpatient admissions
 - Short emergency inpatient admissions (≤ 24 hours)



Study data



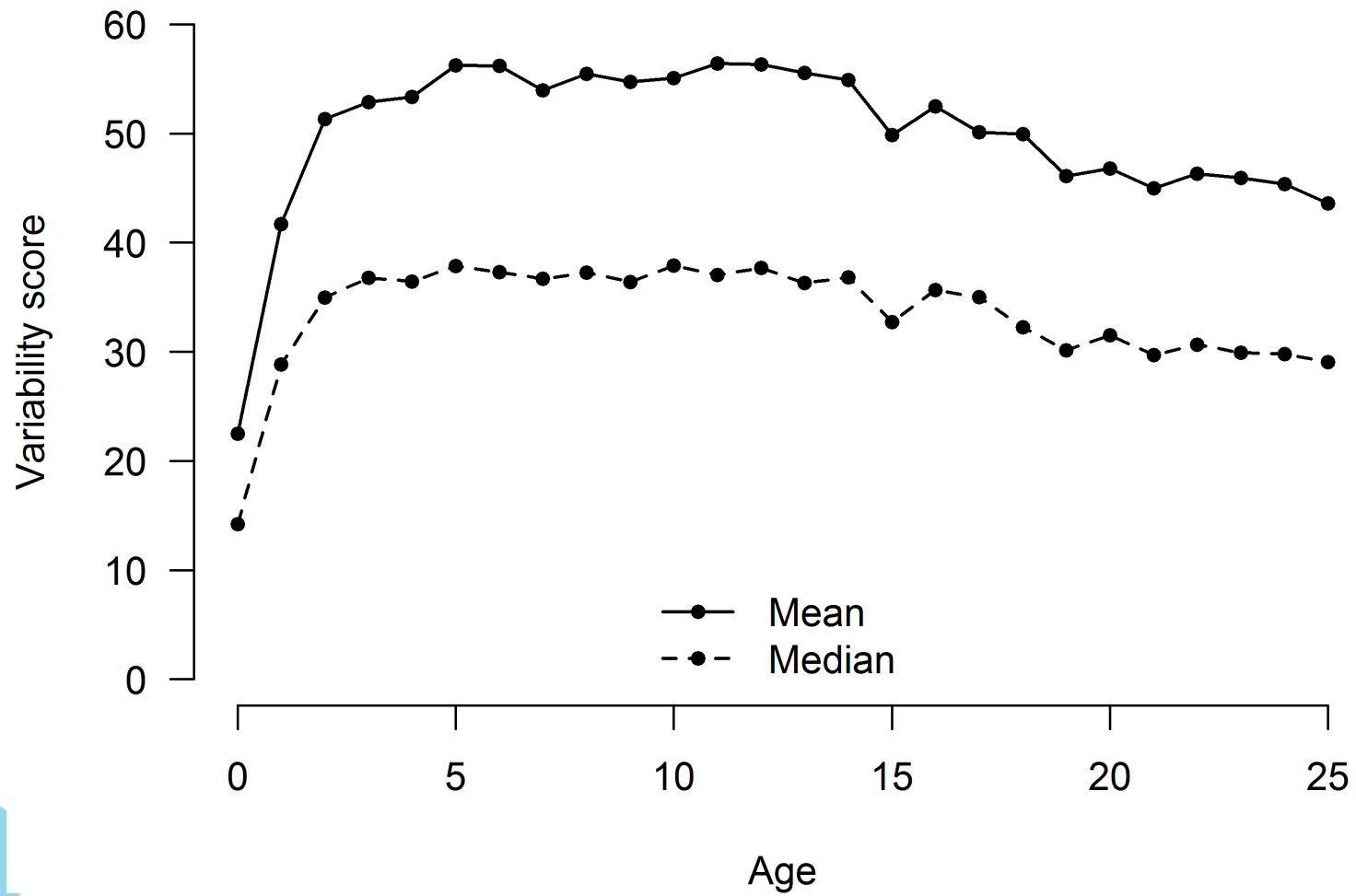
Defining regularity



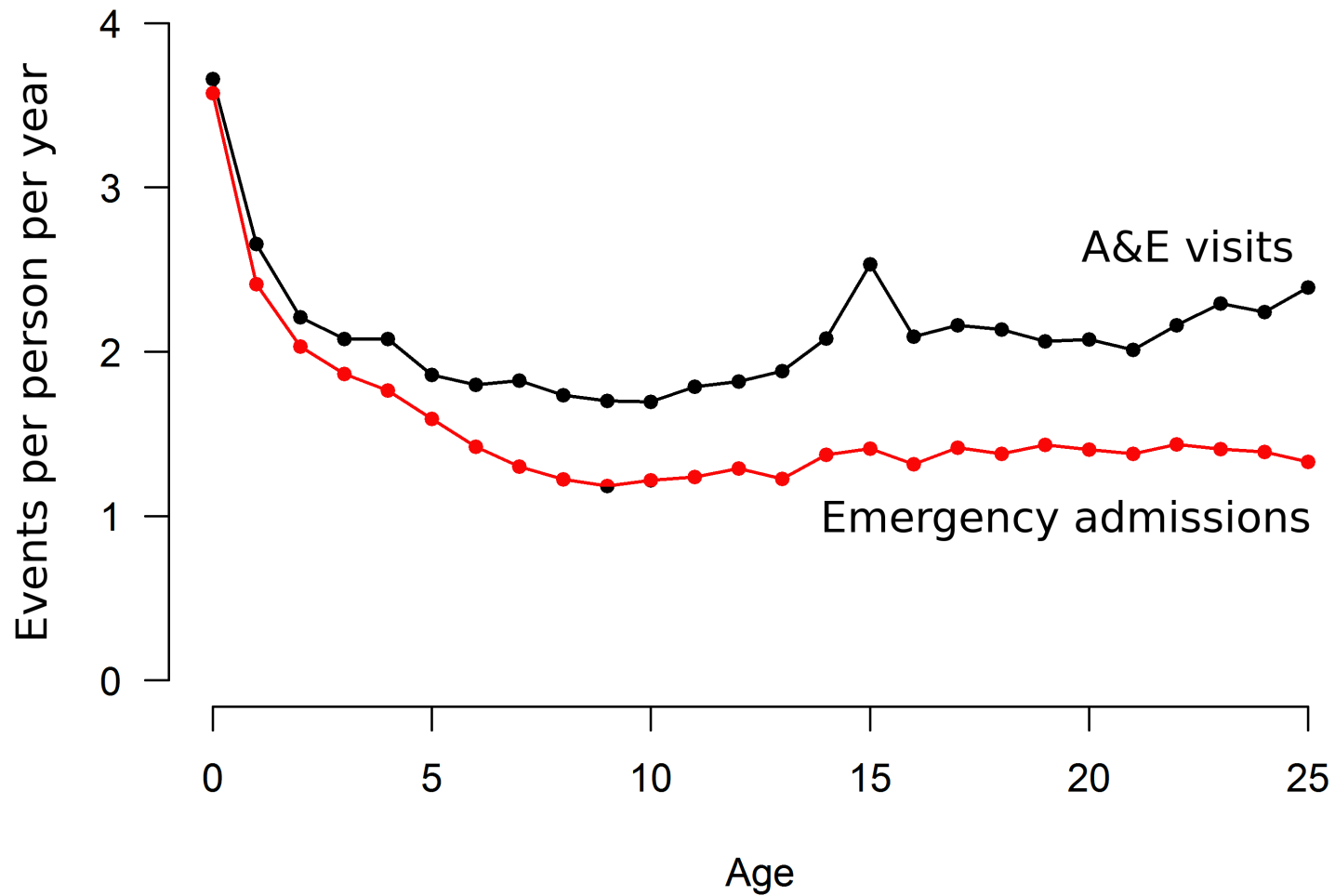
$$\text{Variability score} = \frac{\text{Variance of consultation gaps}}{\text{Mean consultation gap}}$$



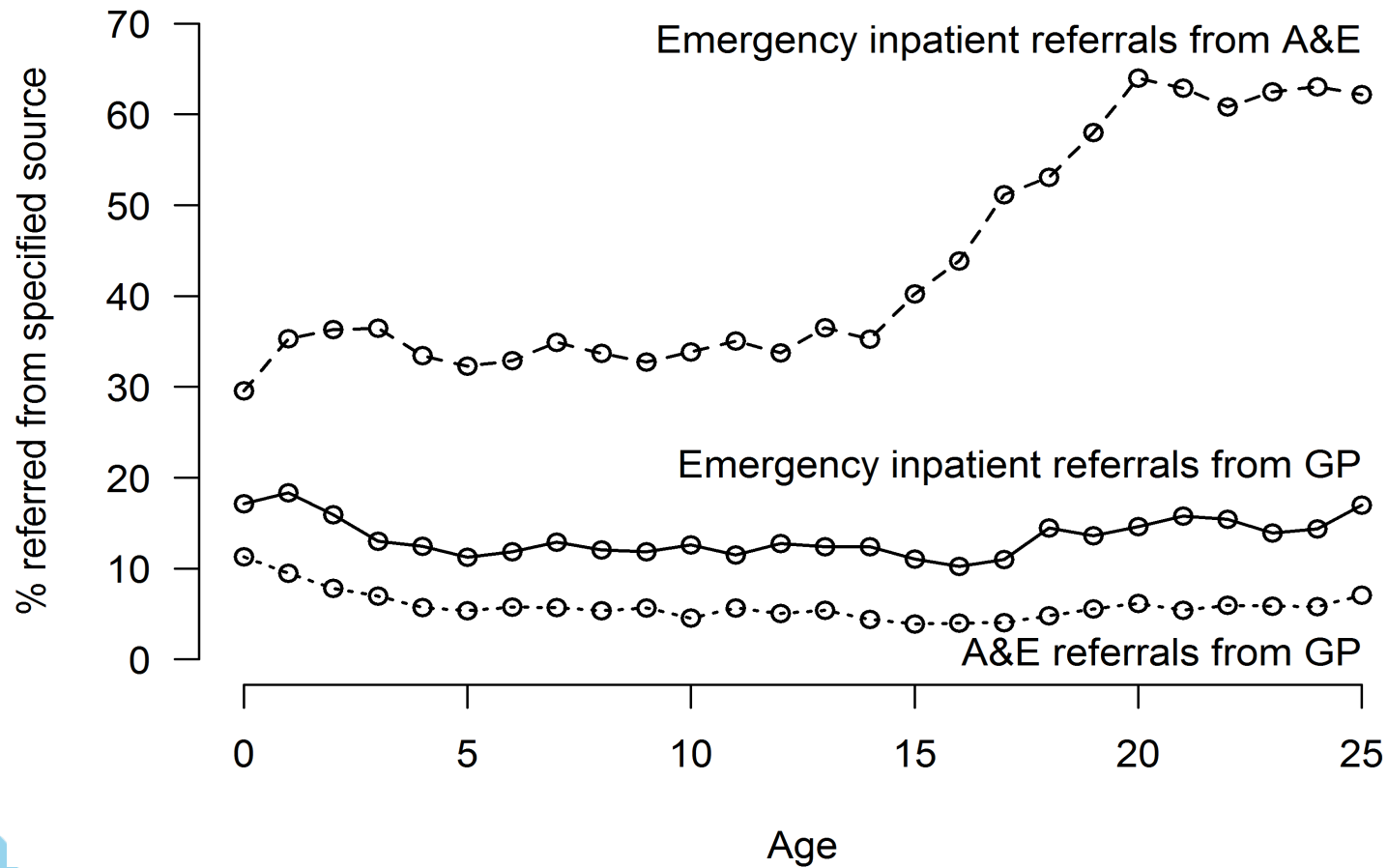
Regularity



A&E visits & emergency admissions



Referrals to emergency care



Modelling approach

Predictors

- **Variability score**
- Age group
- Ethnic group
- Gender
- Main diagnostic group
- Deprivation category
- Number of GP consultations
- Calendar year



3 Models (one per outcome)

- Two levels (random intercept)
- Negative binomial regression



Outcomes

(count data)

- A&E visits
- Emergency inpatient admissions
- Short (<24h) emergency inpatient admissions



Model results

Variability score	A&E visits		Emergency admissions		Short emer. Admissions	
	IRR	95% CI	IRR	95% CI	IRR	95% CI
≤ 10	1 (ref)		1 (ref)		1 (ref)	
> 10, ≤ 25	1.10	1.04–1.15	1.11	1.05–1.16	1.13	1.06–1.20
> 25, ≤ 50	1.08	1.03–1.14	1.14	1.09–1.20	1.19	1.12–1.27
> 50	1.03	0.98–1.09	1.10	1.05–1.16	1.15	1.08–1.23



Interpretation

- Greater regularity is associated with less emergency care
- A causal relationship has not been demonstrated
- Smaller association for very irregular patterns
- Other factors important, e.g. consistency (poster 108)
- **Regular GP attendance may have the potential to reduce emergency care**



References

1. Jarvis S, Parslow RC, Carragher P, *et al*, How many children and young people with life-limiting conditions are clinically unstable? A national data linkage study. *Archives of Disease in Childhood* 2017;**102**:131-138
2. Shumskiy I, Richardson T, Brar S, *et al*, Well-child visits of Medicaid-insured children with medical complexity, *The Journal of Pediatrics* 2018;**199**:223-230

