Consistency of GP seen and regularity of contact are associated with emergency care use 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

The Martin House RESEARCH CENTRE

In partnership with UNIVERSITY of York

Background

Children and young people with life limiting conditions (LLC) have complex healthcare needs, visit Accident & Emergency (A&E) departments and have emergency inpatient admissions. There is some evidence[1,2] that children and young people with LLC go straight to hospital, bypassing General Practitioner (GP) care - improving GP care may reduce this.

This study aimed to determine whether there is an association between consistently seeing the same GP and reduced levels of A&E visits and emergency admissions for this population.

Methods

An extract of GP consultations from the Clinical Practice Research Datalink (CPRD) with linked Hospital Episode Statistics (HES) was requested for 0-25 year olds who had ever had a diagnosis matching either an ICD-10[3] or Read code framework for LLC (Figure 1).

Each year, the Usual Provider of Care Index (proportion of GP consultations per person that were with the most commonly seen GP — higher indicates greater consistency) and coefficient of variation for gaps between consultations (standard deviation of gaps between consultations divided by mean gap between consultations — higher indicates greater variability) was calculated. Also each year, numbers of A&E visits and emergency admissions per person were counted.

Four separate statistical models were developed for A&E visits and emergency admissions as the dependent variables; Usual Provider of Care Index and Coefficient of Variation were the independent variables of interest. Age, ethnic group, main diagnostic group, deprivation category, year and number of GP consultations were also included. Multilevel negative binomial regressions were used as the outcomes were count data clustered by individuals.

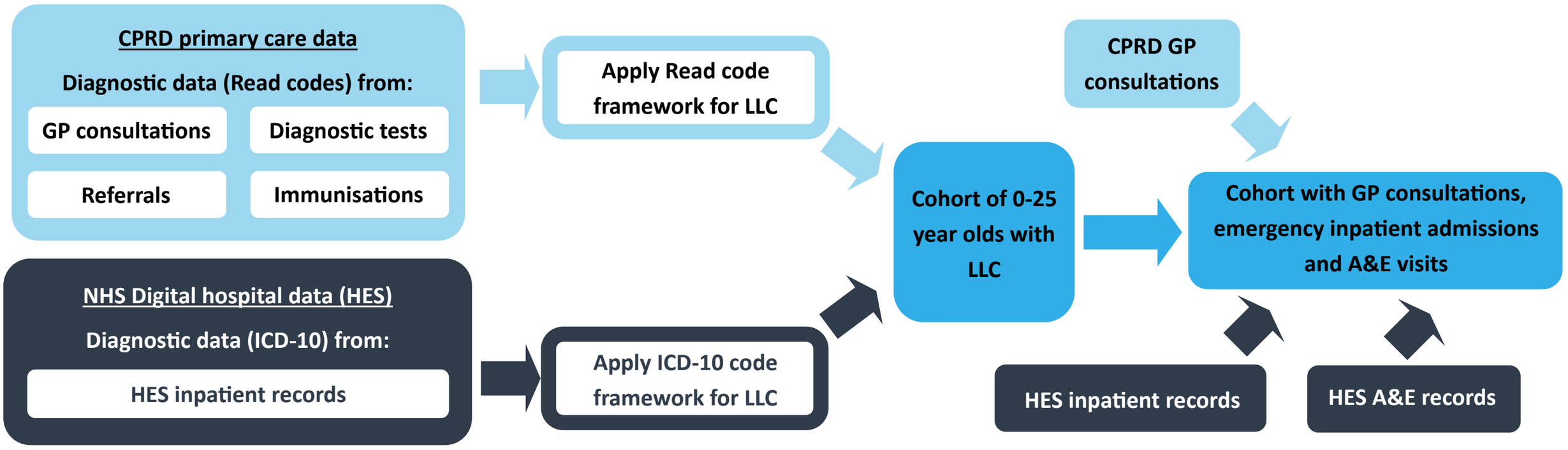

Figure 1: Cohort construction using hospital and primary care data.

Results

Greater consistency of GP seen was associated with a lower rate of A&E visits but no change in emergency admissions (Table 1): those with over two thirds of visits with the same GP had 10% (95%CI 6-14%) fewer A&E visits and than those with under half of consultations with the same GP.

More regular GP visits were associated with reduced emergency admissions, but no change in A&E visits. (Table 2). Those with least regular attendance (coefficient of variation over 1.2) had 11% (95%CI 6-16%) more emergency inpatient admissions than those with most regular attendance (coefficient of variation under 0.75).

Age group, diagnostic group, deprivation category , number of consultations in the year and calendar year were also predictive of numbers of A&E visits and emergency admissions.

Table 1: Incidence rate ratios (IRR) with 95% confidence intervals (CI) for A&E visits and emergency admissions related to consistency of GP seen (Usual Provider of Care Index, UPCI) and consultation variability (Coefficient of Variation, CoV).

	A&E visits				Emergency inpatient admissions			
	IRR	95% CI		P	IRR	95% CI		P
Consistency								
UPCI < 1/2	1 (ref)				1 (ref)			
1/2 ≤ UPCI < 2/3	0.95	0.91	0.98	0.01	1.00	0.97	1.04	0.97
UPCI > 2/3	0.90	0.86	0.94	<0.01	1.02	0.98	1.06	0.32
Variability								
CoV ≤ 0.75	1 (ref)				1 (ref)			
0.75 < CoV ≤ 0.95	1.01	0.96	1.05	0.80	1.04	1.01	1.09	0.02
0.95 < CoV ≤ 1.20	1.02	0.98	1.07	0.29	1.06	1.02	1.10	<0.01
CoV > 1.20	1.03	0.98	1.07	0.23	1.11	1.06	1.16	<0.01

Models also adjusted for: gender, age group, ethnic group, main diagnostic group, deprivation category, number of GP consultations for person in year and calendar year

Conclusions

Ensuring that young people with life limiting conditions have consultations with the same GP as often as possible and on a regular basis may have the potential to reduce their use of emergency care services.

References

1. Lemer C. Annual report of the Chief Medical Officer 2012: Our children deserve better: prevention pays. 2013.

2. Care Quality Commission. From the pond into the sea. Children's transition to adult health services. *London: Care Quality Commission*. 2014.