

Polypharmacy in children and young people with life-limiting conditions: a national observational cohort study in England

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BACKGROUND

- Children and young people with life-limiting conditions (LLCs) may require multiple different medications.
- Polypharmacy, which refers to taking several medications concurrently, is sometimes appropriate but can increase the risk of adverse drug-drug and drug-disease interactions, medication errors and non-adherence, and impact on quality of life.¹
- There is very little evidence about the prevalence and patterns of polypharmacy in children with LLCs.^{2,3}

STUDY AIM AND METHODS

Study aim: To describe prevalence and patterns of polypharmacy in children and young people with LLCs

Design: National observational cohort study in England

Sample: Children and young people age 0-19 years with a diagnosed LLC (n=15,829)

Data: Primary care prescribing data via the Clinical Practice Research Datalink (CPRD) for years 2000-2015

Outcome: Prevalence of polypharmacy and factors associated with prescribing

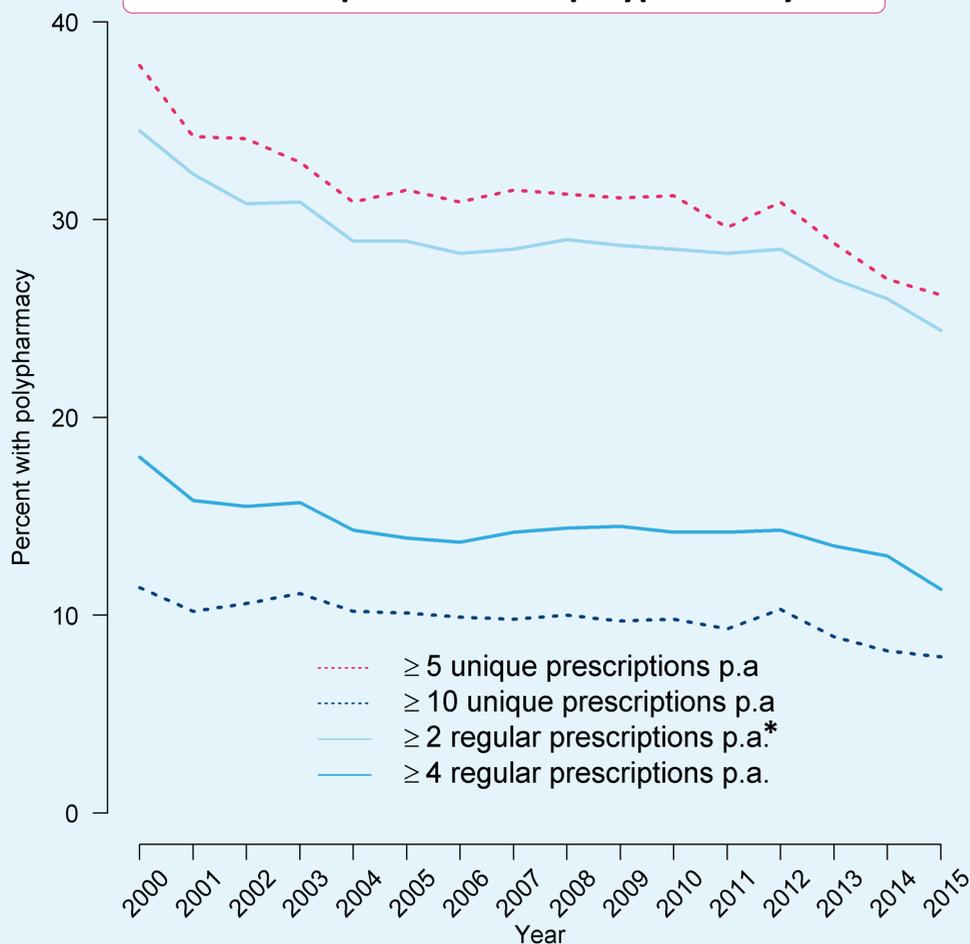
Counting medications:

Distinct medications were identified by product code, a specific coding to CPRD data, which represent an individual drug formulation. Non-medications, vaccines, anaesthetics, and emergency poisoning medications were excluded.

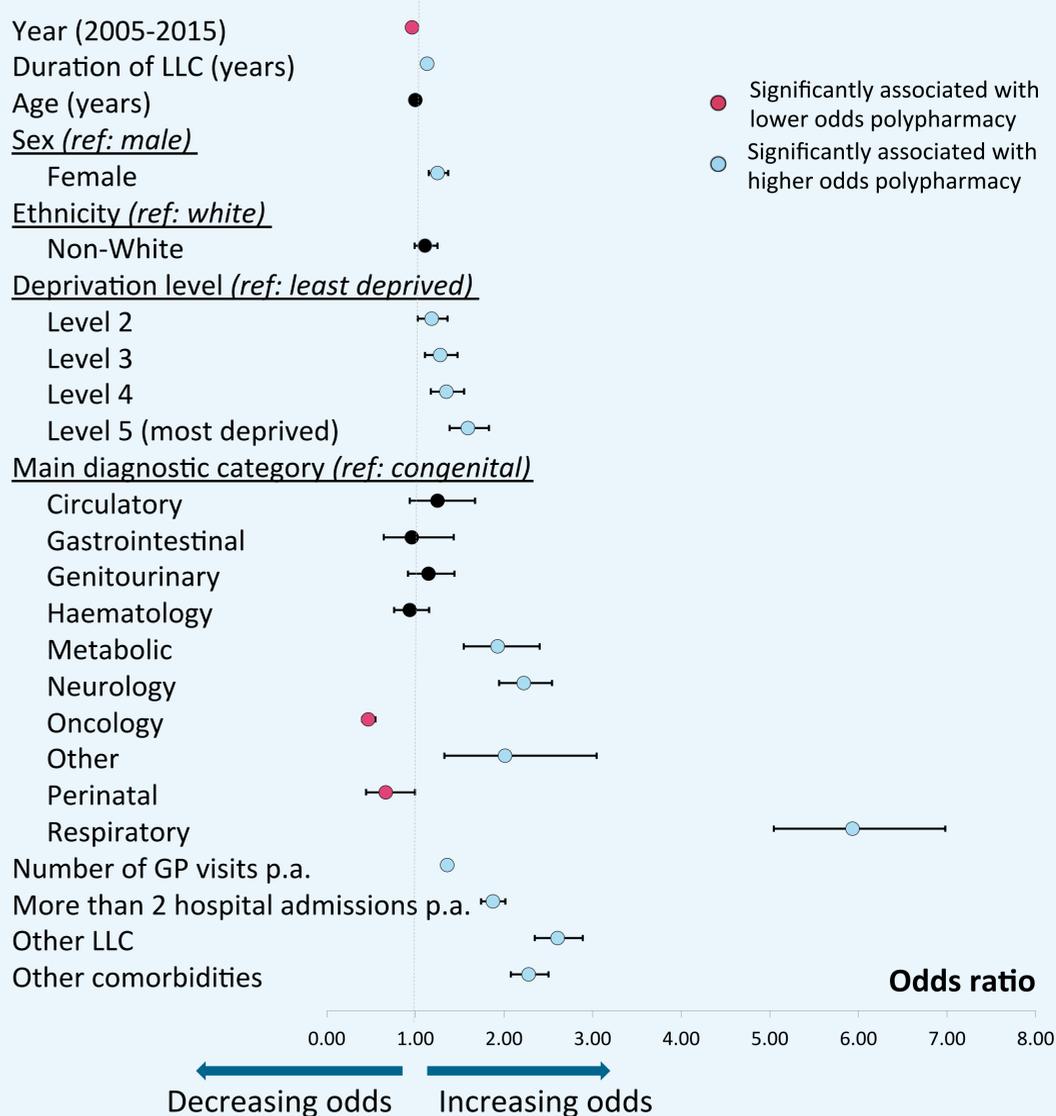
STUDY RESULTS

- Median number of unique prescriptions per year = 3
- Range of different medications per year = 0 - 106
- Average prevalence of polypharmacy (≥5 unique medications) = 35%

Annual prevalence of polypharmacy



Factors associated with polypharmacy (≥ 5 unique medications per year) in children and young people with LLCs



KEY MESSAGES

- Around 30% of children and young people with LLCs are prescribed at least two regular medications each year (the most commonly applied definition of polypharmacy in paediatric populations²)
- Around 10% of children are prescribed at least 10 different medications every year. These children may be at risk of problematic polypharmacy.¹
- Children with respiratory, neurological and metabolic diagnoses are the most likely to experience polypharmacy.
- Children with co-morbidity are at an increased risk of polypharmacy.



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