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How is health visiting delivered to children in England exposed to maternal adversity, and to what effect? A latent class analysis of linked administrative data from 2015–24

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Background

In England, health visiting (HV) services for <5-year-olds aim to improve health and wellbeing through universal and targeted support. At a service-level, HV delivery varies considerably as it is tailored to respond to local health needs. We explored whether there were models of HV delivery for children exposed to maternal adversity that could mitigate associated outcomes.

Methods

We linked HV contacts in Community Services Dataset (CSDS) to hospitalisations in Hospital Episode Statistics (HES). Maternal adversity was flagged using pre-birth hospitalisations with ICD-10 codes for mental health, substance use and violence. Latent class analysis of contact characteristics generated a typology of HV service delivery models. We then examined variation in (i) child injury-related hospitalisations and (ii) repeated maternal A&E attendances across these models, adjusting for individual and area-level factors.

Results

Two main HV delivery models emerged: 'early intervention' with comparatively more contacts in infancy (<6 months) and 'ongoing involvement' with comparatively more contacts after $2^{1}/_{2}$ years. Crude rates of child injury-related hospitalisations and repeated maternal A&E attendances were higher in areas with 'ongoing involvement', but differences were not statistically significant after adjustment (ORadj:1.06, $p = 0.13$ and ORadj:1.12, $p = 0.05$, respectively).

Conclusion

HV services for families facing maternal adversity cluster into distinct delivery models. The extent to which these models reflect strategic responses to differing local needs/contexts requires further qualitative investigation. Given higher baseline risks in areas with 'ongoing involvement', the lack of differences following adjustment may suggest adverse effects were partly mitigated, rather than those services had no impact.

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