Abstracts

REFERENCE


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PREDICTORS AND RISK FACTORS FOR INFANTS PRESENTING TO THE ACCIDENT AND EMERGENCY DEPARTMENT: RESULTS OF A SYSTEMATIC REVIEW

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Aims Paediatric use of hospital urgent care is rising in all age groups but particularly for infants under the age of 1 year. Providing optimal care to this vulnerable group of patients in a busy accident and emergency (A&E) department can be a challenge. We conducted a systematic review to identify clinical, demographic and cultural risk factors associated with an increased likelihood of A&E attendance for infants under the age of 1 year across high income countries.

Methods This review has been conducted in accordance with the 2009 Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA). An electronic search of multiple databases (EMBASE, EMCARE, Medline and CINHAL) was conducted to identify records published from January 2000 to October 2021 reporting on risk factors for presentation to A&E in infants under the age of 1 year. Studies with less than 10 participants or no extractable data, carried out in low and middle-income countries and conference or dissertation abstracts were excluded. Citations of relevant studies were reviewed to identify any additional studies and recommendations were sought from subject experts. The quality of the studies was assessed using the National Institute for Health Research Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies. Studies which were rated ‘poor’ were excluded.

Results The search identified 2039 records of which 192 were identified for title and abstract screening. Full text screening and a manual search of the citations and recommendations from subject experts resulted in a total of 35 studies included for quality assessment. 3 studies were rated as ‘poor’ after quality assessment, hence excluded from the review. A total of 32 studies from 6 countries (United Kingdom, United States, Canada, Portugal, Australia and Italy) were analysed. Key demographic, cultural and clinical risk factors were identified. These included maternal factors (socio-economic deprivation, ethnicity, younger age and a diagnosis of a mental health disorder), infant factors (low birthweight (LBW), prematurity, medical complexity, socio-economic deprivation in association with LBW) and healthcare related factors (delivery by Caesar-ean section, antenatal or perinatal complications, longer post- natal stay). We found limited evidence on the impact of paternal or wider family factors on infant presentation to A&E. Comparable studies were put forward for meta-analysis. This identified maternal risk factors as significant predictive factors for infants presenting to A&E.

Conclusion The key predictors of infant presentations to A&E from this review included maternal, infant and healthcare factors. Maternal factors were most commonly mentioned in the reports with an emphasis on maternal mental health factors.

We hope our findings inform future interventions to target these risk factors and prevent avoidable A&E attendances through family support and education. This would ultimately improve the overall quality of care for families and their infants. In addition, future research work should focus on the role of paternal factors as well as wider social support networks on infants’ presentation to A&E.

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ROUTINE CHILDHOOD VACCINE UPTAKE IN SOUTH LONDON DURING THE EARLY COVID-19 PANDEMIC

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Aims 1) Evaluate the rate of routine childhood vaccine uptake in South London through the first year of the COVID-19 pandemic
2) Identify if there is uptake variation associated with socio-economic or ethnic groups

Methods This is a retrospective cohort study using routinely collected primary care data from the South London Lambeth DataNet database. Participants included children under 18 years registered during the study period. The pre-COVID-19 pandemic period was defined as 1st January 2016 – 31st December 2019. The early pandemic period was defined as 1st January 2020 – 31st December 2020. Demographic data and social determinants of health recorded included age, sex, ethnicity, and socioeconomic background using the index of multiple deprivation.

Primary outcome was the total number of vaccine doses given per year. Secondary outcomes included comparison of uptake rates according to socioeconomic and ethnic background and by vaccine type. Subgroup analyses included evaluation of uptake for vaccines recommended during the first year of life (infant vaccinations). Infant vaccine uptake of one or more doses of the meningitis B, pneumococcal, rotavirus or 6-in-1 vaccines are shown as a percentage of registered children born during the specified year. Infant vaccine uptake of the first dose of the measles, mumps and rubella (MMR) vaccine, recommended on or after the first birthday, are shown as a percentage of registered children born during the preceding year.

Results There was an average of 77,613 children (0-18yrs, 51% male) registered each year over the five-year study period. 339,456 vaccine doses were given in total in 2016-20, with a trend over time toward a decreasing number given each year compared with the number of children registered [table 1A].

The total number of vaccine doses given in 2020 was not out of proportion with this trend. However, in 2020, there was a substantially higher number of influenza vaccines doses given [11,498 doses in 2020 vs 5742-6292 doses in 2016-19] and a lower number of human papilloma virus vaccine doses [145 doses in 2020 vs. 264-442 doses in 2016-19].

The trend does not appear to change according to socioeconomic and ethnic background [table 1B].

Subgroup analyses of infant vaccinations showed the uptake rate of at least one dose of the following vaccines has been constant over the five-year period: 6-in-1 (87-89%), meningitis B (88-89%), and rotavirus (88-89%); but not for the pneumococcal vaccine which showed a reduction of 9% in 2020, and