107 seven infants were included. Self-reported maternal ethnicity of the cohort was 37% Black, 29% White, 15% Asian, 15% Other, 3% Mixed, 1% Unknown. WINROP's sensitivity and specificity for identifying babies who subsequently developed ROP-T were 100% and 54% respectively. The positive predictive and negative predictive values were 17% and 100%, respectively.

In this small, multi-ethnic cohort, WINROP identified all babies who subsequently developed ROP-T. WINROP might have a role in improving ROP screening service delivery but further work is required to confidently validate its performance.

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British paediatric allergy immunity and infection group (BPAIIG)

G580

A 5-YEAR AUDIT OF THE DIAGNOSIS OF MALARIA IN PAEDIATRIC ACCIDENT AND EMERGENCY

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Aims With vague presenting features, malaria can be difficult for clinicians to diagnose. The current guideline recommends 3-day screening to rule out malaria. We aimed to audit the presentation and investigation of children with suspected malaria in Accident and Emergency between February 2014 – January 2019, with comparison of the accuracy of one versus three screens.

Methods Retrospective data was collected from the electronic patient record of all children investigated for malaria between 2014–2019. Data collected included demographics, travel destination, laboratory results and number/results of malaria screens. The reference standard to diagnose malaria was Malaria Reference Laboratory confirmation. Malaria risk was determined using www.fitfortravel.nhs.uk. Fisher's exact test was used for association between categorical variables, with $P < 0.05$ considered statistically significant.

Results 205 children were investigated for malaria from 2014–2019, with 63% travelling to a high-risk destination. Only 14% had three consecutive screens; 64% had one, 16% had two and 6% had >3 non-consecutive screens.

19 children had malaria (90% falciparum), and 95% had travelled to Africa. Travellers to a high-risk destination were much more likely to contract malaria (odds ratio 9.90, $P < 0.05$). Fever was the universal symptom (100%), with vomiting (47%), headache (37%) and anorexia (37%) common presentations.

All initial screens included a rapid diagnostic test (RDT) and blood smear, with every case detected on day one. *P. falciparum* RDT had the best accuracy, with 100% sensitivity and negative predictive value (NPV) ($P < 0.001$). There was no significant difference between 1 screen ($n=132$) and 3 consecutive screens ($n=28$) for sensitivity, specificity, NPV and positive predictive value ($P < 0.05$). Nobody traveling to a low-risk destination contracted malaria, and the NPV of both

microscopy and *P. falciparum* RDT was 100% in this group ($P < 0.001$).

Conclusion Malaria should always be considered in any febrile child that has traveled to a malaria-endemic region. We have modified our guidelines to recommend that a single screen is sufficient to exclude malaria in low-risk travelers where malaria is not strongly suspected. In those that have travelled to a high-risk destination or in whom malaria is strongly suspected, three consecutive screens should remain gold-standard.

G581

IMPACT OF ROTAVIRUS VACCINATION ON INCIDENCE OF INTUSSUSCEPTION IN ENGLAND: A TEN-YEAR ANALYSIS

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Aims Rotavirus vaccination (RV) has been linked to a small increase in the risk of intussusception. It is unclear if RV is causative or precipitates events that would have happened anyway. We sought to determine whether introduction of RV was associated with a change in the overall and age group-specific incidence of childhood intussusception in England.

Methods Using hospital episode statistics for the entire English paediatric population, we used modified Poisson regression to compute intussusception incidence rate ratios (IRR) for the post-vaccine period (2014–2017) compared to the pre-vaccine period (2008–2012) in 0–12 months and 0–36 months age groups and in subgroups 8–16 weeks (point of vaccination), 17–24 weeks, 25–32 weeks, and 33–40 weeks. We also conducted interrupted time series (ITS) analysis to compute IRRs in the 0–12 months and 0–36 months age groups accounting for baseline trends.

Results Incidence rates and IRRs for intussusception in the post-vaccine period versus the pre-vaccine period are shown in table 1.

Abstract G581 Table 1

Age Group	Incidence per 100,000		IRR (95% CI)
	2008–2012	2014–2017	
0–12 months	33.0	28.3	0.86 (0.78–0.94)
8–16 weeks	17.9	26.3	1.46 (1.12–1.91)
17–24 weeks	44.6	34.4	0.77 (0.63–0.94)
25–32 weeks	51.2	36.5	0.71 (0.59–0.86)
33–40 weeks	38.9	36.5	0.94 (0.76–1.15)
0–36 months	16.0	13.8	0.86 (0.80–0.93)

Using ITS analysis, IRRs did not change significantly in the 0–12 months (0.88, 0.74–1.05) or 0–36 months (0.90, 0.78–1.03) age groups.

Conclusion Monovalent RV in England has not resulted in an overall increase in the incidence of intussusception. A transitory increase in the peri-vaccination age group is compensated for by a reduction in older infants, suggesting that RV may reveal individuals already predisposed to intussusception.